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EXPLORATION IN TIBET

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SWAMI PRANAVANANDA (of the Holy Kailas and Manasarovar)



EXPLORATION IN TIBET

SWAMI PRANAVĀNANDA, F.R.G.S.

(OF THE HOLY KAILAS AND MANASAROVAR)

WITH AN INTRODUCTION BY
THE HON'BLE DR. SYAMAPRASAD MOOKERJEE,
MINISTER OF INDUSTRIES AND SUPPLIES,
GOVERNMENT OF INDIA

AND

FOREWORD BY

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HEAD OF THE DEPARTMENT OF GEOGRAPHY, CALCUTTA UNIVERSITY

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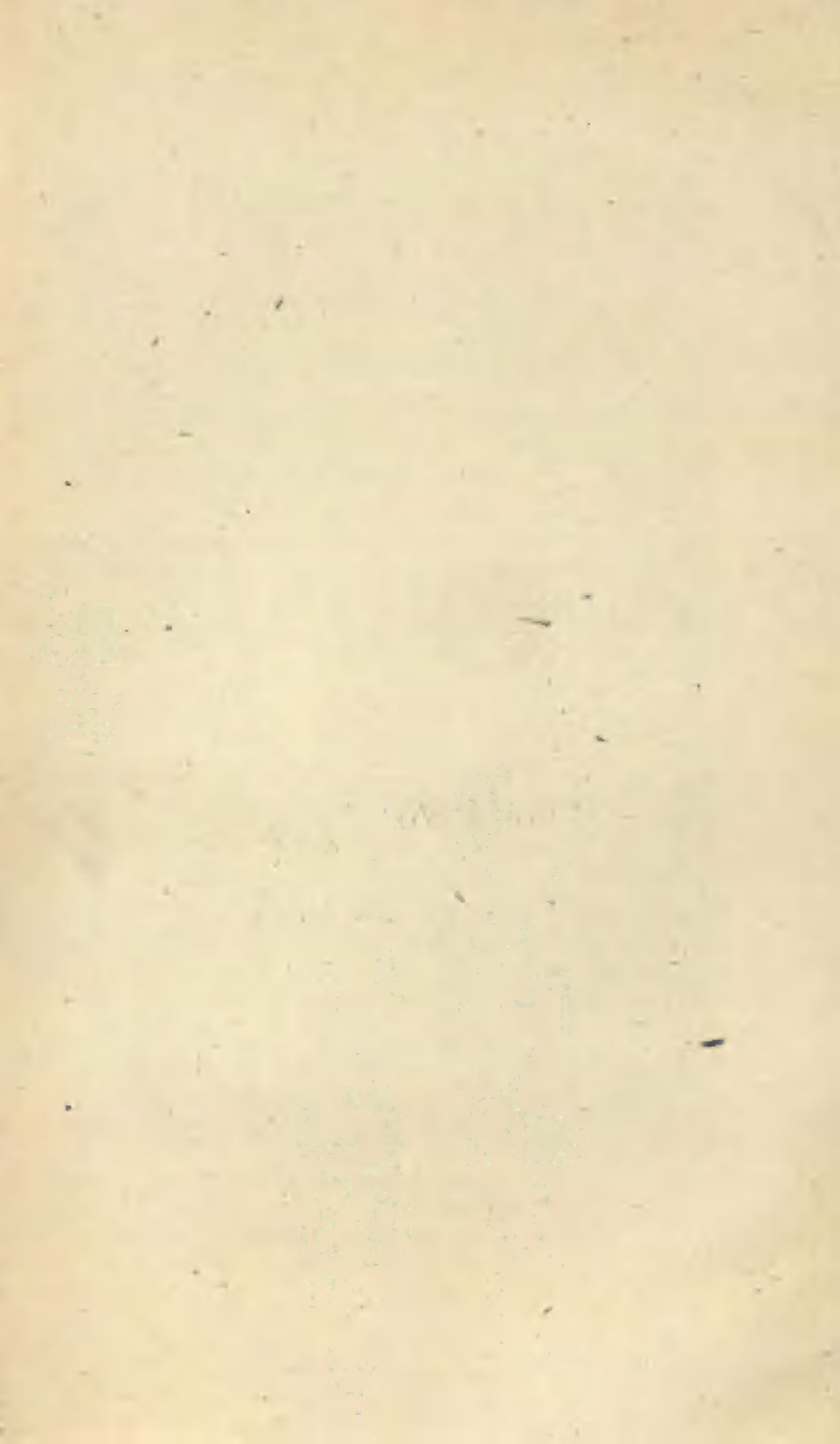


His Holiness Shree 1108 Dr. Swami Jnananandaji Maharaj, D.Sc., Ph.D.,
F.Inst.P., M.S. Sigma XI
The National Physical Laboratory, New Delhi
(Author's Guru Deva)

[See p. 34



To
GURU DEVA



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INTRODUCTION

Swami Pranavananda's " Exploration in Tibet " is a remarkable book. It is indeed a store-house of information on the Kailas-Manasarovar Region in Tibet. Every page of the book bears testimony to Swamiji's energy and zeal, his devotion to truth and power of observation, his capacity to study facts and marshall them effectively. The Swami has given us in these pages the results of years of investigation in the mysteries of the Himalayan rivers and lakes. I have no doubt that all students of the Himalayan Geography will read this work with pleasure and profit.

Swamiji has made a substantial contribution to our knowledge about the sources of the four great rivers, the Indus, the Sutlej, the Brahmaputra and the Karnali. In the course of his exploration, he had to visit many remote corners of Western Tibet hitherto inaccessible. He has studied the features of these remote places with the meticulous care of a trained investigator. His findings have greatly added to our knowledge of the hydrology of the Manasarovar and its sister lake. Besides, he has collected a number of rare fossils of great scientific interest which, when properly studied, should tell us more about this interesting Region.

What strikes one most is that this Indian Explorer is a *Sannyasi* who has done so much with so little of material resources at his command. He carried on his investigation as a hobby during his yearly visits to those holy lands for about a quarter of a century in connection with his spiritual *sadhana*. But his achievement has extorted the admiration of specialists and born explorers, and will, I am confident, inspire the professional geographers to pursue still further the study of the Trans-Himalayan Region.

S. P. Mukherjee

FOREWORD

It gives me great pleasure to write a few lines in appreciation of this latest work of Rev. Swami Pranavānanda—"Exploration in Tibet". I had the privilege of meeting Swami Pranavānanda for the first time in Calcutta about a year ago, when he showed me some of his notes and jottings on the Kailas and Manasarovar Region and asked me to utilize them as best as I could. His ardent zeal and unquenchable enthusiasm have always struck me since then, during our discussions on the subject. On my suggestion, he eventually agreed to write a connected account of his observations relating to the sources of the four great rivers—the Brahmaputra, the Indus, the Sutlej, and the Karnali. That paper was subsequently read before the Calcutta Geographical Society, and was published later in the Geographical Journal of the Royal Geographical Society, London. The Swami then wrote another paper "A Twelve-month on the Holy Kailas and Manasarovar" for the Calcutta Geographical Society. As a result of our discussions on the subject in the light of these two papers, it was finally decided to re-arrange the matter with a view to publishing it in the form of a book. It is a matter of gratification to me to mention here that when Dr. S. P. Mookerjee, former Vice-Chancellor of the Calcutta University, was approached for help and advice, he so very graciously and kindly consented to get it published by the University; and its outcome is the present monograph.

The book consists of two parts. In the first part, the author after giving a general description of the area deals with the various phenomena that he observed during the freezing and the melting of the lakes—Manasarovar and Rakshas Tal. The crevasse, locally known as *mayur*, along the edge of which blocks of ice are piled up, is a peculiar surface feature of Manasarovar when it freezes. The Swami is the first explorer who studied the lakes continuously during the whole of the winter and the early spring, and has given us a vivid and picturesque description of the changing surface features of the lakes during this period. His descriptions of the people and their mode of living, though brief, are no less interesting.

In the second part of the book, the author takes up the question of the sources of the four great rivers and attempts to tackle it thoroughly in an exhaustive manner. The problem of fixing the sources of rivers is a difficult one, especially in a region like Tibet, where rivers are continuously cutting back by head-water erosion. It requires a detailed and careful study before anything like a "last word" can be said on this point. I am glad to find that the Swami is not dogmatic in his assertions, far less egoistic. He examines systematically the different criteria which professional geographers usually apply in the case of the four great rivers, and arrives at the conclusion that it would be most reasonable and nearer the truth to accept the traditional sources. He draws the attention of the reader to certain inconsistencies in Dr. Sven Hedin's treatment of the subject, though I am sure, that the Swami's admiration and regard for Dr. Sven Hedin as an explorer and one of the greatest

geographers, are in no way less than anybody else's.

I am confident that this book will be widely appreciated both in India and abroad, and I hope that it will do much to start lively discussions on the four great Indian rivers, and to rivet the attention of geographers all the world over on this important problem—the sources of these rivers once again. Whatever may be the final outcome of such a searching enquiry, at this stage I cannot but congratulate the author on his work which I am to concede is well-nigh an achievement, if it is borne in mind that he did all this single-handed, unaided by either the technical knowledge of a trained surveyor like Strachey or Ryder, or by the vast resources in men and money, like the great explorer Dr. Sven Hedin. I am certainly of opinion that his results would throw fresh light on the several problems relating to Tibetan geography and would usher in a new era when Indian geographers will once again take their rightful place amongst explorers of Tibet and the Himalayan regions.

In commending this monograph to the reading public, I wish to draw their attention to the fact that geography or exploration is not the author's profession. His field is Spiritual *Sādhana* and his object, the realisation of the ULTIMATE. Swami Pranavānanda had been to the Kailas-Manas Region (Manas Khanda) of Tibet already four times, and had spent a whole year as an inmate of Thugolho Monastery on the southern bank of Lake Manasarovar—a rare privilege never before accorded to a non-Buddhist monk, as we learn from Mr. Paul Brunton's book 'A Hermit in the Himalayas'. May his life and career inspire the

readers of this book to undertake tasks as noble as his, be it in a more materialistic sphere, and in as selfless a manner.

I cannot resist the temptation of concluding my Foreword with an observation made by T. G. Longstaff recently :

“ Those who have travelled in Tibet must admire the character of the Swami displayed by his omission of all reference to the hardships he must have suffered during his winter journeys in these inhospitable regions.”

Department of Geography, }
Calcutta University, }
June 27, 1939. }

S. P. CHATTERJEE

PREFACE TO THE FIRST EDITION

*“ Search for the truth is the noblest occupation of man ;
its publication is a duty.”*

“ I revelled in the consciousness that except the Tibetans themselves, no other human beings but myself had penetrated to this spot.....Not without pride, but still with a feeling of humble thankfulness, I stood there, conscious that I was the first white man who has ever penetrated to the source of the Indus and Brahmaputra.” Thus declared Dr. Sven Hedin in 1908 in his ‘ Trans-Himalaya ’. Since then, the entire Geographical world believed that his was the last word on the subject of ‘ The Sources of the Four Great Rivers of the Holy Kailas and Manasarovar ’.

Thirty years had elapsed before it fell to the lot of a humble Indian Swami in the person of the author unaided by any of the essential modern equipments for exploration, to find out certain discrepancies and errors in the findings of Sven Hedin. Herein lies the explanation for bringing out the present work ; for to discover Nature’s Secrets, to realise Truth, and to disseminate knowledge are as much the duty and privilege of a spiritual aspirant as of a scientist.

On account of the wide spiritual appeal of Mount Kailas and Lake Manasarovar, and the exquisite beauty and grandeur of the entire neighbouring region, the author thinks fit to give a rather elaborate account in the first part of this monograph. In presenting this volume to the public he wishes to draw the atten-

tion of the reader to the fact that when he visited Calcutta in 1938, his work was appreciated by Dr. Shibaprasad Chatterjee, M.Sc., Ph.D. (Lond.), D.Litt. (Paris), F.G.S., Lecturer-in-Charge of Geography, Calcutta University; and a word of encouragement was also given by the Surveyor-General of India and the Director of Map Publication Department. The subject-matter of the book comprises of the two papers read before the Calcutta Geographical Society. A brief note on the subject was also published in the Journal of the Royal Geographical Society, London, for February, 1939. A summary of the paper on the sources of the rivers was also read in the Geography Section of the 26th Session of the Indian Science Congress Association, held at Lahore in January, 1939.

With a view to obviating the necessity of consulting Sven Hedin's works constantly on the part of the reader in following the points of dispute, and elucidating the arguments, no hesitation has been felt in giving lengthy quotations. As referred to in the text, the author had been to the Kailas-Manasarovar area altogether four times and on each occasion proceeded systematically to explore the sources, resolving doubts, if any, pertaining to materials collected in the previous tour. Throughout this enquiry, he has always kept only one aim in the forefront namely, to leave nothing shrouded in mystery nor give room for speculation.

The author considers his labour to have not gone in vain if the book succeeds in inducing even a few readers to undertake an expedition and throw further light by way of confirmation of the author's topography and hydrography of the Kailas-Manasarovar Region.

It is with the greatest pleasure that the author takes this opportunity of expressing his very hearty thanks to Dr. Shibaprasad Chatterjee for the encouragement he has given him and the keen interest he has taken in discussing the subject, but for which the work would not have seen the light of day so soon. The author desires to express his grateful thanks to Dr. Syamaprasad Mookerjee, M.A., B.L., D.Litt., Barrister-at-Law, M.L.A., Ex-Vice-Chancellor of the Calcutta University, for the kind interest he has taken in the new discoveries embodied in the book and giving publicity to them.

Thugolho Gampa,
August, 1939.

SWAMI PRANAVANANDA

(*Of the Holy Kailas and Manasarovar*)

PREFACE TO THE SECOND EDITION

The author had the privilege of travelling in 1928, for the first time, in Western Tibet, on a visit to the Holy Kailas and Manasarovar. In 1935, he undertook a second journey from Mukhuva (Gangotri). In 1936-37 and again in 1938, he travelled from Almora by the Lipu Lekh pass and returned by the same route. He had the privilege of staying for a full twelve-month in the Thugolho Monastery, situated on the southern shore of Manasarovar for his spiritual *sadhana*. In the course of these travels he had opportunities of tracing the 'Four Great Rivers' of this Region namely the Brahmaputra, the Indus, the Sutlej, and the Karnali to their sources, of going over the frozen Lake of Rakshas Tal from east to west and north to south and of landing on the two islands in it.

After the publication of the First Edition of this book, the author visited the Kailas-Manas Region in 1939 by the Unta-dhura, Jayanti, and Kungri-bingri passes. Since 1935, the author has been visiting these places regularly every year and staying there for periods ranging from two to six months; besides he had occasion to spend a continuous sixteen-month, a second time in 1943-44, on the shores of the Holy Manasarovar at Thugolho. Since 1938, he could complete 13 rounds of Kailas and 13 of the Manas, making a total of 24 and 26 rounds respectively. He collected some fossils from the Ganga Chhu and Thugolho and from the Bongza Range in Central Tibet

in 1945-47 ; and visited the ' Deserted Cave-Colony of Pangtha ' in 1947.

Ever since the publication of the First Edition in 1939, the author has been trying to incorporate all new material that might appropriately fit in the text of the book, likely to be of use and general interest to the student of geography. The book has been thoroughly revised, enlarged, and brought up-to-date ; so the first part has been split up into two. In fact, his book entitled '*Kailas-Manasarovar* ',¹ written in Hindi, was intended to be a comprehensive and exhaustive volume on these two mystic places, held sacred by the Hindus and the Buddhists alike. For want of time, it has not been possible to bring out as big a volume. In the attempt to make each part self-contained and independent, repetitions of certain things had become inevitable, which it is hoped, will be appreciated by the readers.

Acknowledgements : The author hereby expresses his deep debt of gratitude and profound respects to his Revered Guru Deva Shree 1108 Dr. Swami Jnananandaji Maharaj, who has always been a source of inspiration and the sole guiding spirit in all his undertakings, both spiritual and scientific.

It is with great pleasure that the author takes this opportunity of expressing his hearty thanks to the Hon'ble Dr. Syamaprasad Mookerjee, Minister for Industries and Supplies, Government of India, for having kindly written an Introduction, in spite of his heavy engagements ; and to the Hon'ble Mr. Justice Ramaprasad Mookerjee, High Court, Calcutta, for

¹ Published by the Hindi Sahitya Sammelan, Allahabad, 440 pp., 117 Illustrations, and 9 maps.

his keen interest in taking up the Second Edition of this book.

The author's thanks are also due to the Surveyor-General of India for getting the maps printed for him in the Survey of India Office, and to Shree K. L. Dev, Officer-in-Charge, Photo-Litho Office, and to Shree P. Sen Gupta, Progressing Officer, for expediting the printing of the maps, in spite of heavy work in the office.

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lover of ancient culture, a philanthropist, and a widely travelled journalist of repute, has borne the entire cost of the boat-expedition of 1946, as a result of which the author has sounded the Gouri-kund, the highest lake (18,400 feet) ever sounded so far, and collected some fossils ; and also reached the northern and southern foot of the Kailas Peak and ascertained the nature of the rocks constituting its walls. Shree Amrit Bhai has made another munificent donation to the author in 1947 by which he could transport his full-length non-collapsible metal boat to the lake Manasarovar which was lying at Almora for five years. The Sheth has also promised to kindly undertake the publication of the Gujarati counterpart of the author's Hindi work '*Kailas-Manasarovar*' and evinces a keen interest in the author's scientific activities on the Manas.

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Thugolho Monastery,
Manasa-Sarovar,
October 1, 1949.

SWAMI PRANAVINANDA,
(Of the Holy Kailas and Manasarovar),
Shyam Nivas,
Almora.

EXPLORATION IN TIBET

PART I

A TWELVE-MONTH ON THE HOLY KAILAS
AND LAKE MANASAROVAR



CHAPTER I

MOUNT KAILAS AND LAKE MANASAROVAR

THE HIMALAYAS

अस्त्युत्तरस्यां दिशि देवतात्मा हिमालयो नाम नगाधिराजः ।
पूर्वापरी तोयनिधीवगाह्य स्थितः पृथिव्या इव मानदण्डः ॥१॥
यं सर्वशैलाः परिकल्प्य वत्सम् मेरी स्थिते दोग्धरि दोहदक्षे ।
भास्वन्ति रत्नानि महौषधीश्च पृथूपदिष्टां दुदुह्वरित्रीम् ॥२॥

1. In the northern part there is a mighty mountain by name Himalaya—the abode of perpetual snow—fittingly called the Lord of mountains, animated by Divinity as its soul and internal spirit (or in other words, Divinity Incarnate). Spanning the wide land from the eastern to the western sea, it stands, as it were, like the measuring rod of earth.

2. At the direction of King Prithu, the selfsame mountain was used as a calf by all other mountains, while the Mount Meru (Kailas) stood as an expert milker of cows and milched the Mother Earth (as if from a cow) the milk of shining gems and medicinal herbs of wonderful virtue and supreme efficacy (in order to adorn the Himalayas).¹

Kalidasa's *Kumarasambhavam*.

¹ That is to say that the Himalayas are rich in mineral wealth and flora lavishly bestowed by Nature and extend from the eastern to the western sea. According to Kalidasa's nomenclature, Himalaya Mountains include Namkin Mountains, Patakal Range, and Arakan Yoma on the east and Hindukush Mountains, Sulaiman, and Kirtar Ranges on the west.

The Himalayas (snow-abode), also known as Himavat, Himachala, Himadri and Giri-Raja, are the highest mountains in the world, though the youngest, and extend for 1,600 miles along the whole of the northern boundary of India. Running from Kandhar and Kashmir right up to the eastern end of Assam, they cover a tract of land from 200 to 300 miles in breadth. There are picturesque descriptions of the Himalayas in Sanskrit literature and numerous books have been written by the Westerners in praise of these snow-clad mountains. They include several ranges of lofty mountains, one behind another; the Great Himalaya Range, Lesser Himalaya Range, Karakoram Range (Krishna Giri), Hindukush,¹ Hindu Raj, Kailas, Ladakh, Zaskar, Mahabharat, Pirpanjal, Dhaol Dhar, Byans, Nagatibba, Siwalik Range (Mainaka Giri), and so on. In these there are several sky-kissing peaks like the Mount Everest² (29,141 feet), K2 or Godwin Austen (28,250), Kanchana-jangha³ (28,146), Makalu (27,790), Dhavalagiri (26,795), Nanga Parvat (26,660), Gosaithan (26,291), Nanda Devi (25,645),

¹ A. Wilson Royle (1875) considers Hindukush to be a part of the Himalayas.

² Its Tibetan name is Kang-chomo-lungma. The people of the Arun Kosi area in Majh-Kirat District in Nepal call the Everest by the name of Kumbhakaran Langur (peak), while the people of the Dud Kosi area call it Svarga-matha or Sarag-matha. When pecuniary conditions permit I have a mind to go to the Dud Kosi and Arun Kosi areas to ascertain its local name.

³ Kanchana in Sanskrit means gold and jangha thigh; so Kanchana-jangha means golden thigh, because this massif appears like gold when the amber rays of the sun fall on it. A few Nepalese indiscriminately call this peak also Kumbha-karan Langur. Its Tibetan name is Kangchen-chenga which means 'glaciers-big-five' or five big ice-clad peaks. It is also called Kang-chen-zo-nga or 'glaciers-big-treasures-five' or five treasures of great snow, for it is a group of five peaks. The present English pronunciation 'Kinchinjunga' is not to the liking of either the Indians or the Tibetans.

Kamet¹ (Ganesh Shikhar 25,447), Gurla Mandhata (25,355), Zongsong (24,472), Chomo-lhari (23,930), Dronagiri (23,184), Gouri Shankar (23,440), Trisul (23,406, 22,490, 22,360), Chaukhamba (Svargarohini 23,420), Pancha Chulhi (22,650), Nandakot (22,510), Kailas (22,028), and a host of others, besides some hundreds of peaks which are above 20,000 feet high. Stupendous is the scenery of the Himalayas and the most sublime are the snow-peaks. There are some of the deepest and the most beautiful gorges and valleys (like Gilgit and Brahmaputra gorges and Bhagirathi valley near Bhairav-ghati), some of the biggest and finest glaciers (like Pindari and Baltaro glaciers), and some of the highest plateaus. "No Alpine gorge can seriously compare with majestic, almost incredible, transverse gorges of the Himalayas."² It is in these mighty mountain ranges that there is habitation even at a height of 17,000 feet above sea-level. In beautiful scenes and exquisite panoramas Himalayas excel the best part of the Alps of Europe and Rockies of America. Kashmir—the paradise on earth, Kullu, Lahul, Kumaon, Nepal, Sikkim, and Bhutan—Nature's beauty spots—are all situated in the lap of the Himalayas.

The Himalayas abound in all kinds of wild animals including the lion, the tiger, the elephant, and the rhinoceros, and the most beautiful birds; are rich in mineral wealth like coal, borax, lead, iron, lime, gold, etc.; are the abode of the best timber, fruit-trees, plants, medicinal herbs, and beautiful flowerbeds; are full of health-resorts and beauty-spots; and are the

1 The word Kamet is of Tibetan origin; *Kang-med*—glacier-fire. This being the highest peak in the region, it catches the first rays of the rising sun and the last rays of the setting sun, flaring up the ice on the top like a huge mass of fire; hence the name Kangmed or Kamet.

² Arnold Heim.

very dwellings of saints and sages. Nowhere else on this globe has Nature been so lavish in the bestowal of her gifts with so much of variety and ideal conditions as in the wilds of these mighty Himalayas.

Sir Francis Younghusband, President of the Royal Geographical Society, London, considered that the Himalayas were responsible for fostering a religious feeling in the people of India who had discovered a number of places for pilgrimage there. He thought that this effect of the Himalayas on the people of the country would be still further increased than in the past when efforts would be made both in India and England to lead expeditions to the Himalayas to discover the best panoramas of the mountains. Young-husband further says, "Efforts should be made both in India and England to lead expeditions to the Himalayas to find out the best view-points of the mountains and make them known to the outside world. When these best spots would be discovered, they would be turned into and preserved as places of pilgrimage."

MOUNT KAILAS AND LAKE MANASA-SAROVARA

' All that is beautiful is sacred '

Two hundred and forty miles from Almora in U. P. and 800 miles from Lhasa, the capital of Tibet, stand Mount Kailas (कैलास) and Lake Manasarovar constituting one of the grandest of the Himalayan beauty-spots. The perpetual snow-clad Peak of the Holy Kailas (styled *Kang Rinpoche* in the Tibetan

language) of hoary antiquity and celebrity, the spotless design of Nature's art, of most bewitching and overpowering beauty, has a vibration of the supreme order from the spiritual point of view. It seems to stand as an immediate revelation of the Almighty in concrete form, which makes man bend his knees and lower his head in reverence. Its gorgeous silvery summit resplendent with the lustre of spiritual aura, pierces into a heavenly height of 22,028 feet above the level of the even bosom of the sea. The *parikrama* or circumambulation of the *Kailas Parvat* is about 32 miles. There are five Buddhist monasteries (*gompas*) around it singing, year in and year out, the glory of the Buddha, the Enlightened, and his five hundred *Bodhisattvas*, and of the Guardian Deity Demchhog and his consort Dorje-Phangmo (*Vajra-Varahi*), said to be seated on the top of the Sacred Peak of Kailas. Mount Kailas is revered in Sanskrit literature as the abode of the All-blissful Lord Shiva and his divine spouse Parvati, the All-enchancing *Prakriti* (Nature) which from 20 miles off is overlooking the Holy Manasarovar and the Rakshas Tal on the south, bedecked with graceful swans.

The Holy Manasa-sarovara (मानस-सरोवर) or Manasarovar, the *Tso Mapham* or *Tso Mavang* of the Tibetans, is the holiest, the most fascinating, the most inspiring, the most famous of all the lakes in the world and the most ancient that civilization knows. "Manasarowar was the first lake known to geography. Lake Manasarowar is famous in Hindu mythology; it had in fact become famous many centuries before the lake of Geneva had aroused any feeling of admiration in civilized man. Before the dawn of history Manasarowar had become the sacred lake and such it has remained

for four millennium."¹ She is majestically calm and dignified like a huge bluish-green emerald or a pure turquoise set between the two mighty and equally majestic silvery mountains, the Kailas on the north and the Gurla Mandhata on the south and between the sister-lake Rakshas Tal or Ravana Hrada (*Langak Tso* of the Tibetans) on the west and some hills on the east. Its heaving bosom, reflecting the resplendent golden rays of the waning sun and the myriad pleasant hues of the vesper sky, or her smooth surface mirroring the amber columns or silvery beams of the rising sun or moon, adds a mystic charm, all her own, to the already mysteriously charming Lake. From spiritual point of view she has a most enrapturing vibration² of the supreme order that can soothe and lull even the most wandering mind into sublime serenity and can transport it into involuntary ecstasies. Stretching majestically over an extensive cradle of the Tibetan plateau and hanging at a heavenly height of 14,950 feet above the sea-level, the vast expanse of the Lake, with a circumference of about 54 miles and a depth of nearly 300 feet, covers an area of 200 square miles. There stand eight monasteries on the holy shores, wherein Buddhist monks strive all their lives to attain the sublimity of the eternal silence of *Nirvana*.

In order to realize and appreciate the grandeur of the Holy Lake in its entirety, one has actually to spend a twelve-month on her shores. For those who have not paid her even a casual visit, it would be difficult, if not impossible, to imagine the diverse

¹ S. G. Burrard and H. H. Hayden, 'A sketch of the Geography and Geology of the Himalaya Mountains and Tibet', Delhi, Survey of India (1934), Part III, p. 228.

² For a fuller treatment of the subject read the author's pamphlet 'Spiritual Vibration'.



1. The Himalayas

[See p. 4



2 The Holy Mount Kailas

[See p. 6

aspects of beauty that she presents round the different seasons of the year to close observers. By far the most magnificent and thrilling of one's experiences would be in winter when the whole Lake freezes hard and again in spring when she breaks and melts to clear blue waters. It is only the inspired poet or the divine artist with his magic colours that can, for instance, describe and represent adequately the beauty and grandeur of sunrise and sunset on the Lake.

TIBETAN AND HINDU MYTHOLOGY

Two versions of *Kangri Karchhak*, the Tibetan *Kailasa Purana*, have been published in Tibetan, one from Dira-phuk Gumpa and the other from Gengta. Also two abstracts of these are printed and they are called *Soldep*. *Kangri Karchhak* says that Kailas is in the centre of the whole universe towering right up into the sky like the handle of a mill-stone, that half way on its side is *Kalpa-Vriksha* (wish-fulfilling tree), that it has square sides of gold and jewels, that the eastern face is crystal, the southern sapphire, the western ruby, and the northern gold. It also says that the Peak is clothed in fragrant flowers and herbs, and there are four footprints of the Buddha on the four sides, so that the Peak might not be taken away into the sky by the deities of that region and four chains so that the denizens of the lower regions might not take it down.

The presiding deity of Kailas is Demchhok¹ (*Dharmapala*), also called Pavo. He puts on tiger-skin and garlands of human skulls and holds *damaru*

¹ Also pronounced 'Demchhog', a detailed account of which is given in Appendix VII.

(vibrant drum) in one hand and *khatam* (trident) in the other. Round Kailas are some more deities sitting in 990 rows with 500 in each. All these also put on tiger-skins, etc., as Demchhok. The *Shakti* or the consort of Demchhok is Dorje-Phangmo or *Vajra-Varahi*, who is shown in Tibetan paintings and idols, as clinging to him in inextricable embrace interlocked in sexual union. Adjacent to the Kailas Peak is situated on its western side a smaller snow-peak called Tjung, which is said to be the abode of Dorje-Phangmo. Besides these Lord Buddha and his 500 *Bodhisattvas* are said to be residing on the Kailas Peak. At the foot of the sacred Peak is seated Hanumanjoo, the monkey-god. There are also the abodes of several more deities around Kailas and Manasarovar. All these deities could be seen only by the pious few. Sounds of bells, cymbals, and other musical instruments are heard on the top of Kailas.

There are seven rows of trees round the Holy Manasarovar, and there is a big mansion in it, in which resides the king of *Nags* (serpent-gods) and the surface of the Lake is like an arc with a huge tree in the middle. The fruits of the tree fall into the Lake with the sound *jam* ; so the surrounding region of the earth is named 'Jambu-ling,' the Jambu-dvipa of Hindu *Puranas*. Some of the fruits that fall into the Lake are eaten by the *Nags* and the rest become gold and sink down to the bottom.

At one place it is written that in the centre of the Jambu is the glorious mountain of Meru of various colours ; on the east it is white like a Brahmin ; on the south it is yellow like a Vaishya ; on the north it is red like a Kshatriya ; and on the west it is black like a Shudra. Four mountains form buttresses to

Meru and on each of these stand severally a *kadamba* tree, a *jambu* tree, a *pipal* tree, and a fig tree.

Since the advent of Aryan civilization into India, Tibet and especially the Kailas-Manasarovar Region have been glorified in the Hindu mythology as part of the Himalayas. The *Ramayana* and the *Mahabharata*, all the *Puranas* in general, and *Manasa-khanda*¹ of *Skanda Purana* in particular, sing the glory of Manasarovar. It is the creation of the *manas* (mind) of Brahma, the first of the Trinity of the Hindu mythology; and according to some the Maharaja Mandhata discovered the Manasarovar. Mandhata is said to have done penance on the shores of Manasarovar at the foot of the mountains which are now known after his name. Recently I read the description of *Achhodasara* in *Kadambari* of Bana Bhatta. I feel that this lake cannot be any other but the celestial Manasa-saras. The description of *Achhodasara* is extremely interesting although it does not fully coincide with facts.

In some Pali and Sanskrit Buddhist works, Manasarovar is described as *Anotatta* or *Anavatapta*—Lake without heat and trouble. In its centre is a tree which bears fruits that are 'omnipotent' in healing all human ailments, physical as well as mental, and as such much sought after by gods and men alike. This *Anavatapta* is described as the only true paradise on earth. It is also said that mighty lotus flowers, as big as the Amitabha Buddha, bloom in the Holy Lake, and the Buddha and the *Bodhisattvas* often sit on

¹ The author has secured a manuscript copy of *Manasa-khanda* from Almora District. Though it claims to be a part of *Skanda Purana*, in fact, it is not. It is not more than two or three hundred years old and is written by some Pandit of Almora. The author intends publishing it with a translation and footnotes.

those flowers. Heavenly *Raja-hansas* will be singing their celestial melodies as they swim in the Lake. On the surrounding mountains of the Lake are found the *shata-mulikas* or hundred herbs.

In Jain literature Kailas is called *Ashtapada*. Adinatha Vrishabhadeva, the first Tirthankar of Jainism, was said to have attained *Nirvana* at Kailas. In *Mahabharata* Manasarovar is also known as *Bindusara* and in Jain works as *Padma Hrada*.

PAKRAMA

The Kailas Range is running from Kashmir to Bhutan, in which that part of the mountain surrounded by the Lha chhu and Zhong chhu is called *Kailas Parvat*, at the northern edge of which is situated the *Kailas Shikhar* or Mount Kailas. This Peak is tetrahedral in shape and cannot be isolated for doing a circuit; so pilgrims do the round of the whole of *Kailas Parvat* which is 32 miles in circumference. (See Maps Nos. 2 and 3).

Orthodox Tibetans do 3 or 13 rounds of the Kailas and the Manas and some of the more pious pilgrims do the *sashtanga-danda-pradakshina* (prostration-circuit) of Manasarovar in about 28 days and of Kailas in 15 days. Several Tibetans do the *parikrama* of Kailas in a single day which is called *ningkor*. Some rich and sick people who cannot do the *parikrama* themselves engage beggars or coolies to do the circumambulations of Kailas or Manasarovar and pay some remuneration including money and provisions for the laborious undertaking. Well-to-do Tibetans get *parikramas* done for the benefit and peace of the souls of their departed relatives; they pay one sheep or three

to six rupees for each *parikrama*. It is believed that one *parikrama* of the Kailas Peak washes away sins of one life, 10 circuits wash away the sins of one *kalpa*, and 108 *parikramas* secure *Nirvana* in this very life.

The five monasteries of Kailas are: (1) Nyanri¹ or Chhuku Gompa (west), (2) Dira-phuk Gompa (north), (3) Zuthul-phuk Gompa (east), (4) Gengta Gompa (south), and (5) Silung Gompa (south). There are four *shapjes* or footprints of the Buddha, four *chaktaks* or chains, and four *chhak-chhal-gangs* or *changja-gangs* round Kailas. There is a big flag-staff called TARBOCHHE at Sershung on the western side of Kailas. *Dar* or *Tar* means flag or *dhvaja* and *chhe* or *chhen* means big; so Darbochhe or Tarbochhe means a big flag-staff, or *Mahadhvaja*; it is locally pronounced Tarbochhe also. To show reverence it is also called Tarchhen Kushok or Darchhen Kushok. A big fair is held there on *Vaishakha Shukla Chaturdasi* and *Purnima* (full moon day in the month of May), as this full moon day is the day of birth, enlightenment, and death of Lord Buddha. About 600 to 1,000 pilgrims from all parts of Tibet (mostly from Purang valley) assemble here for the *mela*. On the *Chaturdasi* day the flag-staff is dug out, old flags are removed, new

¹ In Tibetan *nyan* means the 'great Tibetan sheep' and *ri* means 'mountain'. According to a certain legend a *nyan* entered this mountain; Indians call it wrongly Nandi but it has no connection whatsoever with the Nandi, Shiva's Bull, or the Katyuri King Nandi Deva. Raja Nandi Deva was a contemporary of the Emperor Asoka, who lived two and a half centuries before the Christian era. Buddhism was introduced into Tibet in the seventh century A. D. and the first monastery in Tibet was constructed in A. D. 895 and none of the monasteries of Western Tibet was constructed before the ninth century. So the writings of some, like the author of *Kurmachala Kanti*, to connect the name of Nyanri with that of Raja Nandi Deva of the Asokan period, is far from truth and an anachronism.

flags are tied to the pole, special *pujas* are performed by the monks of Nyanri or Chhuku Gompa, and half raised by the evening. The flag-staff is fully raised on the full moon day by 9 a.m. and the whole procession moves to Dira-phuk by the evening. The flag-staff is hoisted in honour of Buddha, the Enlightened. The raising of the flag-staff is done by the people of Purang-Taklakot under the direct supervision of the two officers of the Viceroys or *Garpons* of Gartok, specially deputed for the work.

Situated on the eastern side of the Kailas Peak is GOURI-KUND, called Thuki-Zingboo by Tibetans. It is a small beautiful oval-shaped lake about $\frac{3}{4}$ mile long and $\frac{1}{2}$ mile broad, covered with sheets of ice almost all the year round. The descent of avalanches into the lake from the southern heights is rather a frequent occurrence. Pilgrims usually take bath in this lake, for doing which very often, they shall have to break the ice on its surface; sometimes the ice is so thick that they desperately hurl numbers of stones on it and yet cannot reach the water. No Tibetan has ever seen or heard this lake to have been completely free from ice. But in 1946, '47, and '48 it completely melted away and I had the unique opportunity of launching my rubber boat '*Janma-Bhoomi*' on it on August 28, 1946. I sank my lead in it for the first time and took 51 soundings and the maximum depth recorded was 84 feet. This is the highest lake (18,400 ft. above sea-level) ever sounded so far by any explorer or survey party.

SERDUNG-CHUKSUM is a line of 19 *chhortens* distributed in three groups of 8, 9, and 2 (from east to west), situated in a belt dug out into the horizontal strata of conglomerate of the perpendicular wall of the southern

face of the Kailas Peak at its base. As one reaches the base of the Kailas Peak, the grandeur of the view from different points is most imposing and simply sublime. On the southern side beginning from the apex of the Kailas Peak, right up to a few hundred yards above the base, there is a series of bare, rocky horizontal projections. Huge quantities of loose snow come down from the top through the ladder-like groove, to the base of Kailas forming a huge heap mixed with conglomerate debris by the side of the Serdung-chuksum. After 12 in the noon, long bars of ice are detached from the crags of the walls of Kailas and hurled down with terrific speed and whizzing sounds by the side of the *chhortens*. *Ser* means gold or yellow; *dung* or *tung* means conch or *stupa*; and *chuksum* means thirteen. These *chhortens* were named Serdung-chuksum, perhaps, when there were thirteen. These *chhortens* or *chaityas* are the monuments of the abbots of the Dekung Monastery, which is 100 miles north-west of Lhasa. They are looked after by the monks of the Gengta Monastery and are periodically repaired and painted in yellow ochre.

From a distance, this line of nineteen *chhortens* artistically set in a belt of the perpendicular wall of the Mount Kailas presents a fine view, as if so many sparrows are lining in the chink of a rock. From the Serdung-chuksum the amphitheatre of Barkha plain and Rakshas Tal with the gallery of mountain peaks extending up to the Indian borders, displays a unique scene extremely superb. Tarchhen is about seven miles from here, the whole distance being almost one continuous steep ascent on sharp stones and moraines. About four and a half miles steep descent from Serdung-

chuksum over moraines to the eastern side of Neten-yelak-jung would lead one to the twin lakelets of Tso KAPALA, also pronounced Tso Kapali, Tso Kavala, and Tso Kavali. The first one is called Rukta and its water is black due to the colour of the black stones in its bed, and is 660 feet in circumference. The other is at a distance of a few yards but a 100 feet lower than the former and is called Durehi. It is about 1,320 feet in circumference; and its water is milk-white. In *Kangri Karchhak* it is said that the water of Rukta is black like *chhang* (Tibetan beer) and of Durehi white like milk. It is further said that the key of Kailas is in the lake Durehi and that of Manasarovar in Langechen-phuk.¹ Though these lakes are situated amidst bare stones with no sign of earth as far the eye could see, at a few places in the bed of the lake Rukta, a soft alluvial soil is thrown up which is carried by pilgrims as the *prasad* of the place. According to Tibetan tradition, only those who have completed thirteen rounds of Kailas can visit these two places. Only the adventurous few can undertake this difficult trip to Serdung-chuksum and Tso Kapala, but the trip would be more than compensatory. I have visited these two places on four occasions, twice in 1937, once in 1942, and once in 1946. I am the first non-Tibetan who had ever visited these places Dr. Sven Hedin did not know of these twin lakes of Tso Kapala, and has wrongly named Thuki-Zingboo or Gouri-kund as Tso Kavala. I have collected a fourteen-pound marine fossil-bed from Rukta on September 15, 1942.²

¹ There are two caves of this name, one below the Nyanri Gompa and the other on the northern shores of Manasarovar.

² See the heading 'Fossils'.



3. The Holy Mount Kailas and Lake Manasa-sarovar
Photo by Courtesy of Mr. Salim Ali, Bombay





4 Little Girls of Chaudans Bhot

(See p. 119)

From Ganga Chhu or Barkha one can easily see the appearance of a huge swan sitting on the southern face of the Kailas Peak, the steep rock projections forming the neck. The gigantic rock that is situated to the south of the Tijung has got the appearance of a sitting monkey and is called Tyu-punjung or Hanumanju in the *Kangri Karchhak*, Hanuman of the *Puranas*. This is seen from long distances. Situated at the southern foot of Kailas is a mountain called Neten-yelak-jung consisting of horizontal strata of conglomerate and surrounded on either side by streams coming from the southern and the eastern bases of Kailas. It is like a huge bull (*Nandi*) sitting in front of the Nature's Kailas-Temple. The majestic view of the Mount Kailas, the veritable Throne of Gods, soaring high between the peaks of Chenresig and Chhagnadorje on the north, with its stretched out shoulder on the north-east, a little further up with a somewhat conical form shooting up from behind the peak of Jambyang when seen from Charok-donkhang, presenting only a tip from Khando-sanglam chhu on the east, exhibiting two large black spots on its eastern shoulder when seen from Chiu Gompa or the shores of the Lake Manasarovar, with a huge dome-like glacier at its eastern base, with a giagantic foot-like glacier at its south-eastern base near Charok-phurdod la, with the line-drawing of a big sitting swan on the southern face as if in readiness to give a lift to the celestial couple of Shiva and Parvati so that it might enjoy an aerial view of the whole of Kailas Region with an undescribable variety of scenes, with the horizontal conglomerate strata of Neten-yelak-jung mountain squatting at its southern foot like Shiva's bull when seen from Silung Gompa, with a

sharp conical form jetting into the pitch blue sky when seen while approaching it from Tirthapuri on the south-west or from the top of Nyanri Gompa, like the inverted crescent a little further on, loaf-like with Saturnian rings on the west, with a colossal Egyptian pyramidal form towering on the north-west, and with the artistic form seen from half a mile before reaching Dira-phuk Gompa, one and all, exhibits a variety of show. As a matter of fact every side of Kailas has a peculiar grace, charm, attraction and beauty of its own. There is something indescribably fascinating in going round the Peak of Kailas, each hour presenting a fresh scene and each turn revealing new glimpses and beauties of mountain-grandeur.

The actual circumference of Manasarovar is about 54 miles at the most and not 200 or 80 miles as the Japanese Buddhist monk Ekai Kawaguchi (who travelled in Tibet for three years) and some other casual visitors, who themselves never undertook the circuit of the Lake, would ask us to believe. Of the 25 circumambulations of the Holy Manas, which I had undertaken, I did some in four days, some in three days, and one in two days. Skull-like, the Lake is much broader in the north than in the south. The east, south, west, and north coasts of the Lake are roughly 16, 10, 13, and 15 miles in length respectively and it is 14 to 15½ miles across. The *parikrama* of Manasarovar, visiting all the eight monasteries, is about 64 miles. (See Map No. 4).

Tibetans do the *parikrama* (*kora*) of the Holy Lake in winter when the whole Lake and all the rivers and streams flowing into it are frozen, so that they might go throughout along the shores; or in early winter or spring when most of the smaller streams are dry and

the bigger ones contain less water so as to be easily fordable. In the summer and rainy seasons one cannot go along the shores throughout. On the northern side one shall have to leave the shores and go higher up. Moreover, all the streams and rivers flowing into the Lake will be in high floods in summer due to melting snows and would be flowing very furiously, which oftentimes become unfordable after midday. On such occasions one has to stop for the night and wait till the next morning for low-tide. Moreover, at the time when Indian pilgrims visit Kailas and the Manas, the shores of the Lake are much frequented by nomad robber-tribes going up and down. Those who want to go round the Holy Lake in summer or rainy season should do so in parties guarded by armed men and they should take good ponies or yaks to cross the rapid rivers.¹

The eight monasteries round Manasarovar are: (1) Gossul Gompa (west), (2) Chiu Gompa (north-west), (3) Cherkip Gompa (north), (4) Langpona Gompa (north), (5) Ponri Gompa (north), (6) Seralung Gompa (east), (7) Yerngo Gompa (south), and (8) Thugolho Gompa or Thokar (south). There are four *lings*, or *chhortens* (memorials of some great lamas) and four *chhak-chhal-gangs* (wherefrom *sashtangadanda-pranamam* or prostration-salute is made) round Manasarovar. The four *chhortens* are at Chiu Gompa, Langpona Gompa, Seralung Gompa, and Thugolho Gompa. The four *chhak-chhal-gangs* are at Momodungu (south-west), Sera la (west), Havaseni-madang (east), and Riljung (south-east).

¹ For fuller details of the pilgrimage, one can refer to the author's work 'Kailas-Manasarovar', published by the S. P. League, Calcutta. Royal octavo size, 250 pp., 149 illustrations, 17 maps, 8 appendices, and 27 route tables.

NEW LIGHT ON THE SOURCES OF THE FOUR
GREAT RIVERS OF THE HOLY KAILAS
AND MANASAROVAR¹

The Tibetan *Kailas Purana* says that the Ganga had at first descended from Kailas to the spring Chhumik-thungtol ; that four rivers emerged out of this spring in copper pipes through the Lake Manas ; that (1) the Ganga came out of the elephant-mouth (Langchen Khambab,² the Elephant-mouthed river, or the Sutlej) near the Dulchu Gumpa on the west and went to Chhemo Ganga in *Gyagar* (India) ; that (2) the Sindu went northwards in the beginning and came out of the peacock-mouth (Mapcha Khambab, the Peacock-mouthed river, or the Karnali) at Mapcha-Chungo on the south in Lankapuring and proceeded westwards to Sindu-yul ; that (3) the Pakshu or Vakshu went westwards in the beginning and thence came out of the horse-mouth (Tamchok Khambab, Horse-mouthed river, or the Brahmaputra) from a mountain in Chema-yungdung on the east, went to Chang (Tashi-Lhunpo) and thence to Kamarupa in India, where it is called Lohita ; and that (4) Sita went southwards in the beginning and thence came out of the lion-mouth (Senge-Khambab, Lion-mouthed river, or the Indus) from a mountain called Senge, situated on the north of Kailas and went to Baltichen and Changhor ; that the water of the Sutlej is cool, the water of the Karnali warm, the water of the Brahmaputra cold, and the water of the Indus hot ; that there are sands of gold in the Sutlej, sands of silver in the Karnali, sands of cat's-eye in the Brahma-

¹ This subject has been fully dealt with in Part III.

² The word *Khambab* means 'coming out of the mouth of'.

putra, and sands of diamond in the Indus ; and that those who drink the water of the Sutlej would become strong like elephants, those who drink the water of the Karnali would become beautiful like a peacock, those who drink the water of the Brahmaputra would become sturdy like a horse, and those who drink the water of the Indus would become heroic like a lion. It is also said that these four rivers circle seven times round Kailas and Manasarovar and then take their courses towards west, south, east, and north respectively.

According to the Tibetan traditions and scriptures, the source of the Sutlej is in the springs near Dulchu¹ Gompa, about 30 miles west of Manasarovar or in the Rakshas Tal, for all practical purposes from a layman's point of view. The genetic source is in the Kanglung glaciers, about 30 miles east of Manasarovar. The source of the Indus is in the springs of Senge Khambab, north-east of Kailas, about 62 miles from Manasarovar ; the source of the Brahmaputra is in the Chema-yungdung glaciers, about 63 miles south-east of Manasarovar ; and the source of the Karnali is in the spring of Mapcha-Chungo, about 30 miles south-east of Manasarovar and the genetic source is in the Lampiya pass. The sources of these four rivers are within a distance of about 45 miles (as the crow flies) from the shores of the Holy Lake. So the description of the Tibetan scriptures that these four rivers take their sources from Kailas and Manasarovar is not far from the truth, also because the author of the *Kangri Karchhak* must certainly have taken Kailas and Manasarovar including the area surrounding them extending up to the sources of these rivers as ' Kailas-Manasarovar Region '.

¹ Also pronounced ' Dunchu '.

RAKSHAS TAL

At a distance of 2 to 5 miles to the west of Manasarovar is the Rakshas Tal, also known as Ravana Hrada, Rakshas Sarovar, or Ravana Sarovar where Ravana of Lanka-fame is said to have done penance to propitiate Lord Shiva, the third of the Hindu Trinity and the dweller of Kailas. It is called Langak Tso in Tibetan. *La* means mountain, *nga* means five, and *tso* lake ; so Langak Tso means a lake in which there are five mountains or in which five mountains are drowned.

After several years of effort I could procure transport in 1942, for doing the round of Rakshas Tal. I did a full round of the Tal (13th to 16th October) by closely following the highly irregular coast. For want of a guide and due to the unfavourable weather conditions, I had to do the round in great hurry. Tempestuous winds were blowing and the path was full of sharp stones; night temperature used to be 16°F. below freezing point ; and sometimes I had to jump over huge boulders as there was no regular path along the shore at several places ; but the changing scenery is most thrilling and romantically beautiful. As a matter of fact, each hour reveals such a fresh scene and each bend presents such new glimpses of the mountain-grandeur and a variety of show that one is bewildered and becomes dumb-struck. Early in the morning the lake was so rough and raging with high roaring waves that the whole surface was white with foam ; after a few minutes I was walking inside a gulf the sides of which fall sheer and the water in it was emerald-green and so perfectly still that the tiniest pebbles in its bed and

the swimming fish could be clearly seen and snapped; and perfect stillness reigned supreme.

In one corner one would come across innumerable brahminy ducks warbling in boggy lands ; and in another scores of *kiyangs* would be seen fearlessly grazing in grassy plains. From one promontory the Mandhata massif could be seen on the south with its giant heads piercing into the azure, as if watching the raging waves in the lake ; and at another place the water in a bay was frozen and the Holy Kailas with all its majesty and sublime serenity was reflecting in it, as if in a mirror. At one place a long narrow embankment jets far into the lake as if going to meet the other shore; and at another point the peninsulas are so peculiarly formed that they had so confounded even Dr. Sven Hedin that he saw three islands in the lake, whereas there are only two in reality. From one peninsula the island in the lake appears to be so near and imposing that one is tempted to jump over it. I had to undergo great hardships in doing this trip but the pleasure I derived from it and the materials I could collect were more than compensatory.

The circumference of Rakshas Tal is about 77 miles ; its east, south, west, and north coasts are roughly 18, 22, 28½, and 8½ miles in length respectively; and it is about 17 miles north to south and 13 miles east to west at the maximum points. About 2½ miles away from the shore, situated on the north-western corner is Chepgey Gompa. It is the only monastery of Rakshas Tal and is a branch of Mashang¹ Gompa. Henry Strachey mentions the gompa 'Chebgia Gumba' but Dr. Sven Hedin makes no mention of it nor marks

¹ Also pronounced 'Mangshang'.

it in his map. About 3 miles from the island Topserma, situated just on the western shore of the Tal, is the only house of the *goba* of Shungba or Jungba. The place is called Debring. (See Map No. 4).

GANGA CHHU

There goes a story in Tibetan scriptures about the Rakshas Tal and the Ganga Chhu, the outlet of the Manas into the Rakshas. Rakshas Tal was originally the abode of demons ; as such nobody drank water out of it. Two golden fishes that were in the Manas fought against each other and one pursued the other into Rakshas Tal. The course which the golden fishes took then is the present course of the Ganga Chhu. When the holy waters of the Manas flowed out of it, through the course of the golden fishes into Rakshas Tal, it became sanctified. From that time onwards people began to drink the water of Rakshas Tal.

I made 25 rounds of the Holy Manasarovar and found Ganga Chhu to be the only outlet through which the excess water in the Manas flows out into the Rakshas. This outlet is 40 to 100 feet in breadth, six miles long in its winding course and 2 to 4 feet in depth, generally during rainy season. I had crossed the Ganga Chhu 46 times. Manasarovar and Rakshas Tal might have been one continuous lake once and the range of hills now separating the two lakes might be due to a subsequent upheaval, the Ganga Chhu forming the outlet of the Manas into the Rakshas. So the statement and belief of several people who had never made even one full circuit of Manasarovar, that the Brahmaputra and the Indus take their rise on its eastern and northern banks respectively, are absolutely groundless



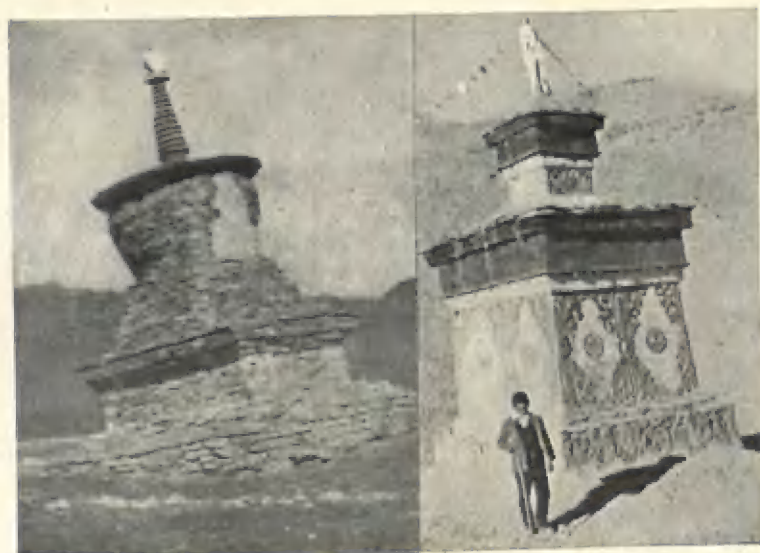
5 Image of Lord Buddha in Simbiling Gumpa

[See p. 95



6. Simbiling Gumpa of Taklakot

[See p. 95]



7 Chhorten--Stupa or Chaitya

[See p. 82]

and erroneous like the statements that the Indus has its source at the northern or southern foot of Kailas Peak and flows on its western or southern side, and that the Sutlej takes its rise in Gourì-kund and flows on the eastern side of Kailas.

ISLANDS IN RAKSHAS TAL

There are two islands in Rakshas Tal, one Lachato and the other Topserma (or Dopserma). I visited these islands on April 15 and 16, 1937, when the lake was completely frozen. I went over the frozen lake from east to west and from south to north on a yak. LACHATO is a rocky island having the appearance of a tortoise with the neck stretched out towards a peninsula on the southern shore. The distance between the neck of the island and the cape of the peninsula is about half a mile. The circumference of the island is nearly one mile. The island is rocky and hilly and not at all boggy. On the top of the hill is a *laptche*, a heap of white stones, with *mani*-slabs. On the western and eastern sides of the hill there are walled enclosures of egg-gatherers. There were several swans on the gravel plateau of the north-eastern part of the island. The egg-gatherers of the *goba* (headman) of the village Kardung were expected there in the last week of April, when the swans begin to lay eggs.

Two accidents that had occurred in Rakshas Tal several years ago were narrated to me by an old Tibetan. Once when two egg-gatherers were on the Lachato, Rakshas Tal broke in the night all of a sudden and they were stranded on the island. They had to live on what little provisions they had at that time, on the meat of the few hares that were on the island, and

on the eggs of swans ; they remained on the island till the lake froze in the next winter to reach the mainland. But they were very much emaciated for want of sufficient food and one of them succumbed to death a few days after ; but nobody had the idea of making a small skin-boat or a raft to bring the stranded men to the mainland. On another occasion (about the year 1906), in early spring when a fully loaded yak was crossing the lake, the ice under its feet gave way and it sank down under its own weight.

TOPSERMA, the second island, is completely rocky and hilly like the Lachato but is much bigger. Its southern part is named TONAK. The island is about a mile from east to west and about three-fourths of a mile from north to south. On the eastern projection of the hill there is a *pucca*-walled house in ruins, in which a Khampa Lama is said to have lived for seven years some time ago. He used to come out of the island to the shores in winter after the freezing of the lake to take provisions. I picked up a small clay-made image of *Chenresig* (Avalokiteshvara)¹ from the ruins, as a memento of my visit to the island; I am the first non-Tibetan who has ever stood on the tops of the hills on these two islands in Rakshas Tal. Down below the projection there are two or three walled enclosures. Topserma is under the jurisdiction of the *goba* of Shungba. There were no aquatic birds on the island when I visited it.

In the maps of Dr. Sven Hedin and of the Survey of India Office, three islands are shown in Rakshas Tal, although the names of only two of them are given. Further, this third island and Topserma are drawn in

¹ This is preserved in the 'Asutosh Museum', Calcutta University.

broken lines. From a close personal observation and information I found ONLY TWO ISLANDS in the Rakshas Tal. Secondly, the *goba* of the Rakshas Tal area got his house constructed about the year 1930, within three miles from the island Topserma, which is under his jurisdiction. He too says that there are only two islands in the Rakshas Tal. Thirdly, in August 1938, I procured a water-colour painting of the Kailas Manasarovar Region drawn by a monk of the famous Simbiling Monastery of Taklakot, which had once Tsepgye Gompa as its branch on the west coast of Rakshas Tal. The monk, therefore, had surely an intimate knowledge of the Rakshas Tal. He has shown only two islands in the Rakshas Tal in his painting. Lastly, when Sven Hedin went round the Rakshas Tal he had with him local Tibetan guides, who doubtless would have given him the name of the third island also, if it had been there. It is therefore evident that both the maps are doubtful about the existence of the third island and about the correct position of the Topserma; yet they show the third island also. That Sven Hedin himself has no definite knowledge about these islands can be seen from the following: "The two islands are easily visible in the south-western corner of the lake, but one can only seldom make out that they are real islands and not parts of promontories. There may possibly be three of them. The greatest is called Dopserma, though other Tibetans called it Dotser."¹

DESCRIPTION OF MANASAROVAR

The water of Manasarovar is as sweet as that of any river or of any glacial lake. The Holy Manas

¹ Sven Hedin, 'Southern Tibet', Vol. II, p. 167.

provides fine caves on her shores near Gossul and Cherkip Gompas for hermits, and fine camping grounds and good sites here and there for Tibetans to build monasteries and houses. It is marshy at certain places and rocky or sandy at others. One comes across boulders as smooth and round as pebbles and also slabs as finely cut and shaped as slates. It is warm on the Gossul side and very cold on other sides. In spite of the existence of hot springs the Chiu hillside is very cold. From one monastery the Manas presents a fine view of her northern neighbour, the Kailas, and from another she completely keeps it out of sight, while from a third monastery the Rakshas Tal is presented beautifully. There are some lakelets and lagoons scattered all round the Lake, like Yushup tso on the south-west, Tseti tso on the west, Kurkyal-chhungo, Sham tso, and Ding tso on the north and north-east. In Tibetan scriptures Kurkyal-chhungo is described as the head of Manasarovar, set apart for *devatas* or gods to bathe in. In winter, shepherds flock to her shores and in summer they move to the upper parts of valleys. Indians hold a market on one side and the Nepalese on the other. Certain monasteries are owned by Ladakh, others by Bhutan, some by Purang-Taklakot, and still others are affiliated to the Universities or monasteries of Central Tibet. Several paths from different parts of the world converge to this holy spot. It would be no exaggeration if this region is styled the cynosure of the world, for both the Buddhists and the Hindus consisting of nearly 90 crores of souls, look upon Kailas and Manasarovar as the holiest of regions.

One cannot generally escape or get away without noticing a tragic spectacle here and there in Mana-

sarovar Region. It is, for example, a pathetic sight to see hundreds of fish frozen and crushed in the swimming posture under the transparent ice (as at the mouth of the Gyuma chhu); or a whole flock or a line of ducks with their young ones frozen to death and sandwiched on the surface of the ever-changing mysterious Lake; or scores of new-born lambs and kids frozen to death in a shepherd camp on a single cold night, for winter is the yearning season of sheep and goats. Sometimes, groups of *kiyangs* and wild goats are frozen to death on all fours, in deep snows.

One peculiarity with the Lake is that at times when there are high waves near the shores the middle is calm and clear like a mirror, reflecting the silvery dome of the Kailas if seen from the southern side or the Mandhata's giant heads if seen from the north-east. On full moon nights, the queen of night, overhead, with sparkling diamonds in her dark tresses, majestically looks down upon the holy Lake; the scene is simply indescribable. At sunset the whole of the Kailas range on the north becomes a fiery region all of a sudden, throwing an observer into a spell of trance, and by the time he returns to consciousness he sees only the silvery Peak in his front. On another occasion, at the time of sunset, the whole of the Mandhata catches fire and terrible flames with rolling columns of smoke rise in the west, only to be buried very soon into the depths of abysmal darkness; the scene is simply bewitching. Sometimes the morning sun gilds the Kailas and Mandhata Peaks or pours forth molten gold on the Holy Lake; still at other times the last lingering rays of the setting sun gild the snow ranges, the sight of which is very pleasing and soothing both to the eyes

and the mind. On another occasion the whole of the Kailas-Manas Region is completely covered with a thick blanket of snow from head to foot, making it impossible to point out which is which; one cannot tell a house from a tent, or the Lake from the land; one cannot distinguish the ground from the pit, or the mound from the bush. A moonlit night with a clear sky beggars description and one becomes simply spellbound. Perhaps moonlight is brightest on the Tibetan plateau. Now you have scorching sun; the next moment hail and snow begins to fall copiously; and shortly after, having a nap and coming out of your room, you will see a clear blue sky and bright sun above and a bed of pearl-like hail and white snow on the ground. Hence the oft-quoted Hindi couplet:

मानसरोवर कौन शरसे । बिन बादल हिम बरसे ।

"Who can approach Manasarovar where snow falls without clouds?" Such phenomena form sufficient material for the ecstatic outbursts of a poet.

Thus the Kailas-Manas Region engages the attention of any person of any calling or profession—whether he be a poet or a painter, a physicist or a chemist, a botanist or a zoologist, a geologist or a climatologist, a geographer or a historian, a hunter or a sportsman, a skater or a skier, a physiologist or a psychologist, an ethnologist or a sociologist, a pilgrim or a tourist, a hermit or a householder, a clergyman or a tradesman, a treasure-hunter or a spirit-hunter, a theist or an atheist, a scholar or a politician, young or old, man or woman.

LOTUS AND ROYAL SWAN

The author has often been asked about the existence of golden lotuses, pearls, and the traditional

Raja-hansas or Royal Swans in Manasarovar, and about the *Mahatmas* and Tibetan mystics round Kailas and Manasarovar. In this connection it may be said without any fear of contradiction that the first two are totally mythological; but if some one wants to console himself by saying that they might have once existed millions of years back, there is no dispute with them.

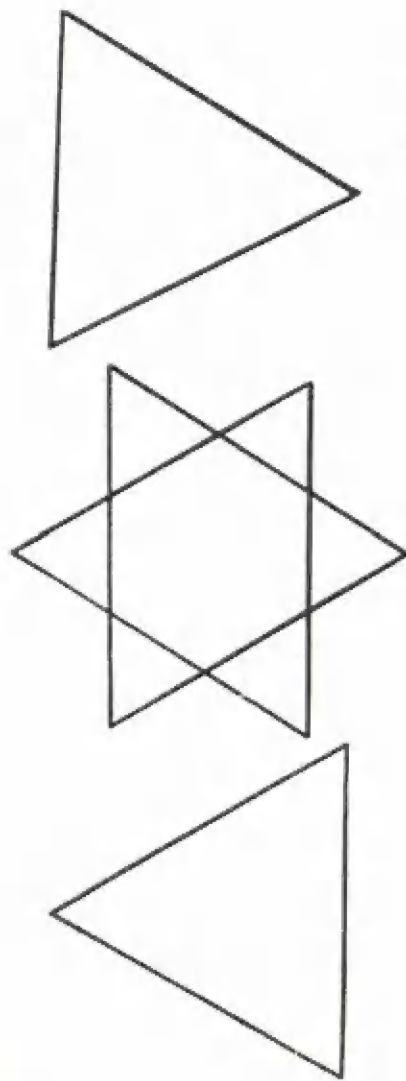
It will not be out of place here to mention that since 1940 I have been making experiments to grow lotus, lily, water-chestnut (*singhara* सिंघाड़ा) and *makhana* (मखाना) in Manasarovar Lakes. Experiments with seeds have not been very successful so far; so I propose trying now with bulbs brought from Kashmir. It is yet to be seen how far it would be a success. I would be thankful if anyone interested in the subject could give some useful suggestions.

In connection with swans it may be noted that there are three varieties of aquatic birds in Manas Region. The first is called *ngangba* (ङङ्बा) in Tibetan, which to my mind, corresponds to the traditional swan. I had examined three male and two female cygnets, five months old, captured in 1945. Its bill is yellow with a black knob at the tip of it and the legs orange. There are two black horizontal bars on the head, the first being thicker extending from eye to eye. The back of the neck, lower part of the wings, and the tip of the bill are black. The upper part of the body is grey or light-ash in colour and the lower parts and the face are white. The female bird is whiter than the male. It comes to India in October and November and stays up to March and April, but breeds in Tibet and Central Asia. It goes up to Chilka lake on the east and on the west up to Malwa

and Surat; very rarely it is seen going up to Mysore. It is about 30 inches in length and is called *saran* (सरन) in the United Provinces. This is the bar-headed goose of Jerdon. The great poet Kalidasa must have seen some stray Siberian mute swan or the whooper swan in Kashmir and combined its description with that of the Tibetan *ngangba* and gave a beautiful poetic description of the Royal Swans or *Raja-hansas* in his celebrated *Kavya*, the *Meghaduta*, as hailing from the *Manasa-saras*. Having known this convention of the modern ornithologist and the Indian ornithologists and poets there should be no objection in calling the *Manas-ngangba*, the swan.

The second variety of bird, called *ngaru-serchung* (ङरु-सेर्चुङ्ग) is deep or almond-brown in complexion. Its head and belly are light brown and white, and the lower part of the wings, tail, legs, and bill are black. This also migrates to India but a few of them stay away in Manas Region near hot springs or some other warmer regions. This is the brahminy duck. The third variety is *chakarma* and is deep grey or like a pigeon in colour. Its head and wings are light grey, neck and belly white, tip of the tail and bill black, and legs and bill pink. The bill is thin like that of a pigeon. By the side of the eyes there are black spots presenting the appearance of another set of eyes. This feeds freely on fish. It is the gull (तित्तिरी). Heron or the black-necked crane (भारत) also is seen in pairs near Ding tso, Kurkyal-chhungo, so-called 'old bed of the Sutlej', and other places.

There is a black variety of swan in Australia. Swans had been known to attain their second centenary even in captivity. In the beginning of January, 1947, a whooper swan was shot near Chilka lake and a mute



8. Triangles

[See p. 288]



9. Demchig in Yab-Yum Pose from the Deserted Cave-Colony of Pangtha. Photo by courtesy of Dr. Arnold Heim & August Gansser, Morgarten Verlag Zürich [See pp. 9, 293]



10. Tea-churning [See p. 79]

swan in Baluchistan in December, 1946. Since the mute swan, the whooper, the bar-headed goose, the goose, and the wild goose, all belong to the same family ; it is only a question of taste as to how to name them, but there is no question as to which is right or which is wrong. For example, the Tibetan *kiyang* is called a wild ass by the Zoologist, whereas Tibetans maintain it to be a wild horse. In fact it has got the physical features of both and looks more like a mule than anything else. Why should a particular rodent be called a guinea-pig when it is not a pig in fact? Why should a particular duck be called brahminy duck? A non-brahmin may as well take objection to it and an over-enthusiastic minister may get the prefix removed forthwith. Though the whooper is considered to be a swan, still many maintain it to be only a Bombay duck. There is no doubt that in ancient days there were in India expert ornithologists¹ who studied avifauna a good deal, long before the modern scientists coined the word ornithology, for we have several references to *Vayasavidyika* or *Vayavidyika* (वायस-विधिक or वायो-विधिक) in *Shatapatha Brahmana* XIII, 4. 3. 13, Patanjali IV. 2. 60, and other works.

Tibetans assert the *ngangba* to be a pure vegetarian that lives merely on moss, grass, and water-reeds. It does not touch fish, oysters, or snails. This is considered holy by the Tibetan who does not kill it even for his table although he is not as scrupulous about the eggs, which are freely consumed. This species of the bird exists on the smaller islet Lachato in the Rakshas Tal more abundantly than in the Manas, probably the reason being that except for a short period in winter

¹ Dr. V. S. Agarwala, ' Ancient Indian Ornithologists ', ' Journal of the Indian Museums ', December 1945.

neither men nor wolves can reach and lay their hands on them or their eggs. These swans daily go to the so-called ' old bed of the Sutlej ' in winter to eat grass and moss. The servants of Kardung *goba* go to the island in the first week of April for collecting eggs. They go there and return within two weeks, for after that time this island is cut off from the mainland by the breaking of ice near the shores. It is said that two to four thousand eggs are collected in those two weeks. These eggs are three times the size of normal hen's eggs. Swans are found in large numbers in the Manas near Thugolho, Yushup tso, Gossul, Tseti tso, Chiu Gompa, Ganga Chhu, Kurkyal-chhungo, Ding tso, and at the mouths of the Samo and Tag. The bogs near the lakelets all around the Manas and the Rakshas, Loma-goma, Dulchu, Gyanima-raf, Chhakra, and other places are the favourite habitat of the *ngangba* and the *ngaru*. These swans lay their eggs under small sand-hills. In late spring one can see these birds breasting the waves in pairs, keeping a number of young ones in their midst and the chicks could be counted up to ten. They swim in the water producing diverging ripples in the calm Lake.

MAHATMAS AND TIBETAN MYSTICS

Several sensational articles are freely published both in the East and the West about the *Mahatmas* and *Siddhas*¹ in this little seen and less studied part of the world, namely Tibet. Most of the stories gaining currency here are mere exaggerations or misrepresentations and are more of the nature of

¹ One who has attained high psychic and supernatural powers.

journalistic stunts than anything else. It may, however, be mentioned here that I had visited about 50 monasteries (*i.e.*, almost all the monasteries of Western Tibet and most of them in Ladakh) and met not less than 1,500 monks, both *lamas* and *dabas* ; but I did not come across any great *siddha* or a *yogi* worth mentioning in the whole of Western Tibet. There are no doubt several *lamas* who are learned in their scriptures and well-versed in the external *tantrik* rites and incantation-performances, which are elaborately conducted for days together. People in general are very superstitious, religious-minded, devotional, and mystic in temperament. I did not meet any really spiritually advanced *lama* or *yogi* nor any monk 90 to 100 years old, though some people claim to have seen sages like Vyasa and Ashvatthama and other monks and Christian saints thousands of years old with corporeal bodies. Personally I would neither accept such credulous statements nor would force others to disbelieve them but would prefer to leave the matter to individual judgement and discrimination.

This is not to say, however, that really great *mahatmas* or saints and *yogis* do not exist ; nor should the above statement be misconstrued to mean that I am sceptical about the reality of the existence of these advanced souls, as I consider my own Revered Teacher Dr. Swami Jnanananda to be one such adept, who has been spending his time in maintaining equanimity of mind in order to be in constant communion with the Divine look in static and dynamic forms. In calmness and serenity he dives deep into the Divine Silence of Existence and in his activity his actions are directed to be in touch with the Divine manifestation and the Law and its harmony that governs such a manifesta-

tion. He had conducted experimental research¹ for their verification for wellnigh 15 years on the Continent in the Physical Laboratories at Dresden, Berlin, Prague, Liverpool, Ann Arbor (Michigan), and other places and was conferred Doctorate by two Universities, and he is now taking active part as the Senior Scientific Officer, The National Physical Laboratory, Delhi. The simple fact remains that really spiritually advanced *yogis* or *lamas* are as rare a phenomenon here as anywhere else.

I was, however, informed by the Governor of Purang-Taklakot, of monks being immured for some years and in a few cases for life, in Central Tibet. But this practice is in the nature of mortification or a miracle rather than a symbol of high spiritual attainment. During my several visits to Tibet I had the good fortune of coming across a *lama* from Lhasa (aged about 50) in the year 1936 and of having the rare privilege of attending some *tantrik* rites (which non-Tibetans are not allowed to attend) he conducted in the Simbiling Monastery of Taklakot continuously for three days. He was a good *sadhaka* and a *tantrik*. I also met a young *tulku-lama* (incarnation-monk) aged 16, in Ponri Gompa² in the year 1928, whom I felt to be an elevated soul. In the Simbiling Gompa of Taklakot there is an incarnation-*lama*, popularly known as Nav-Kushok. He is aged about 48 (born in

¹ Dr. Swami Jnanananda, D.Sc. (Prague), Ph.D. (Liverpool), F. Inst. P. (London), Member Sigma Xi (U. S. A.), M.A.A.S., 'New and Precise Methods in the Spectroscopy of X-Radiations', 'Thick Magnetic Electron Lens Beta Ray Spectrometer, its Theory, Construction and Application', 'Radio-active Isotope of Gold 79 Au 196 and Low Energy Range of its Spectrum', Beta-Radiations of Antimony 124, Tantalum 182, Tungsten 185, Iridium 192 and Uranium XI', and 'High Vacua', etc.

² Fifth monastery of Manasarovar.

A. D. 1900). He is a highly learned monk, a good painter, and 'a great *sadhaka*. I know him intimately since 1936. Pilgrims would do well to pay a visit to him. These are the only notables whom I happened to come across. It is really regrettable to find some people fabricating curious and funny stories which are utterly false to trade upon the credulity of the innocent and religious-minded folk. There is no doubt, however, that the surroundings of the Holy Kailas and Manasarovar are highly charged with spiritual vibrations of the supreme order, which make one exhilarated and elevated.

CHAPTER II

FREEZING OF MANASAROVAR

TEMPERATURE READINGS

When I had sojourned on the shores of Manasarovar in 1936-37, winter had already begun to make itself felt from the middle of September. From October 1 onward up to May 14, 1937, the minimum temperature persistently remained below the freezing point. The maximum temperature during the year was 67°F. on July 19, in the verandah of the room and the minimum was—18.5°F. On February 18, it was so cold that the sputum of a person standing in the balcony would reach the ground as solid ice. The lowest maximum temperature was 2°F. on February 16. The maximum temperature remained below the freezing point for nearly 3½ months; and on several occasions even at 12 in the noon the temperature would be 10°F. Of course the winter of 1936-37 was unusually severe in the Kailas-Manasarovar Region. During the winter of 1943-44 the minimum temperature was—18°F¹.

EARLY PREMONITIONS

Occasional snowfalls began from the second week of September, but never more than 1½ feet on the shores of Manasarovar, although there was heavy snowfall of several feet round Kailas. Tempestuous winds began

¹ The author lost all his exploratory diaries from 1937-46 during the Calcutta riots. So he could not give full details of his sojourn on the Manas during 1943-44.

to howl in an ever-increasing manner from the first of November. From the middle of December, water near the edges of the Lake began to freeze to a width of about two feet. From the 21st, water towards the middle of the Lake froze here and there to a thickness of 2 to 4 inches and sheets of ice about 50 to 100 yards in edge were drifting towards the shores. Cyclonic gales from the Mandhata peaks were giving rise to huge oceanic waves in the Lake, roaring and thundering aloud. Lamas and other Tibetans were foretelling that the Lake would freeze in her entirety on the full moon day of the month of *Margasirsha* (December-January).

ACTUAL FREEZING OF THE LAKE

It was Monday, December 28, 1936. Somehow that day I came out of my meditation room at the unusual hour of 7 a.m. and looked around. I could not say why, it was all like the dead of night, absolute silence and perfect calmness prevailing. Curious to know as to what had happened I went to the terrace of the monastery and stood up, and in an instant felt a thrill and lost all physical consciousness for some time—how long I can not exactly tell. As I regained consciousness I was stunned by the sight of the Holy Kailas on the north-west, piercing into the pitch-blue sky and dyed in amber robes of the early morning sun (which had not yet reached other places) and overlooking the Holy Lake in all majesty and dignity, bewitching even the inanimate creation. Not even a single sheep or lamb in the sheep-yard bleated. While I was musing over the splendour and over-powering beauty of the Holy Mount, it rapidly changed several robes

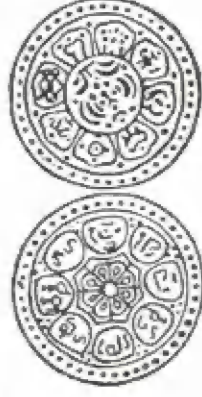
of various colours and hues and ultimately decided upon the usual perpetual silver garment, which was reflecting in the clear and calm blue mirror of the mid-Lake. Dazzled at the sight, I lowered my eyes towards the Lake that was just in front of me. The very first sight of the Holy Lake made me forget myself and even the Lake herself for some time, and by the time I could see the Lake again, the sun was sufficiently high on the eastern horizon. For over a mile from the shores, the waters in the Lake were frozen into milk-white ice all around. It was an unforgettable and memorable sight—the middle of the Lake picturesquely with its unfrozen deep blue waters quite calm and serene, reflecting the Kailas and the snowy cap of the Ponri peak and the resplendent rays of the morning sun. Oh! How happy I was! I utterly fail to describe the bliss I enjoyed and the mystic charm of the enchanting Lake. Tears of joy trickled down the cheeks, only to be frozen on the parapet. There was pin-drop silence everywhere. Like the eternal silence of *Nirvana* there was perfect stillness all around. What creature could there be on the face of earth which would not feel and become one with that sublime serenity of silence of the Almighty? I leaned against the parapet of the terrace and stood dumb-struck by the most enrapturing splendour and lustre of the sublime serenity of the spiritual aura of the two holiest places on the face of earth. How fortunate I felt myself to have been under such a wonderful spell! Then I was lost within myself. At about 10 a.m. I was roused by the hailing shouts of the villagers. The whole village was on the house-tops, hoisting coloured flags, burning incense and hailing the gods aloud So! So!! So!!! Lung-ta-ro! Lung-ta-ro!! Lung-ta-ro!!!

The following material is the direct result of the author's personal observations and is not intended to be a scientific study. It is the author's intention to provide a general overview of the situation in the field of research on the effects of the environment on the development of the human brain. The author is not a specialist in this field and the information presented here is not intended to be a substitute for professional advice. The author is not responsible for any errors or omissions in this document.

II. A Page from Kanjur

[See p. 89]

ଶ୍ରୀମଦ୍ଭଗବତ୍ପଞ୍ଚାବତାରପୁରାଣ



12. *Mani-Mantra – Om-ma-ni-pa-dme-hum-hri*

100

11

Tonka, Tibetan Coin - Obverse and Reverse [See p. 130]



14. His Excellency the Governor (Zongpon)
of Taklakot (1942-45) - [See p. 125]



15. Zongpon's Wife

[See p. 125]

There descended a thorough change in the whole atmosphere (physical, mental, and spiritual) and I felt as if I was in an altogether new world. By December 30, that is, in full three days, the entire Lake was frozen like the mythological ocean of curds.¹ But curiously enough Sven Hedin in his 'Trans-Himalaya' reports that the whole of Manasarovar freezes over in an hour!²

FISSURES AND SOUNDS IN THE LAKE

From January 1, occasional sounds and rumblings began to be heard now and then and from the 7th they became more disturbing and terrible for about a month, as if the Lake was reluctant and resisting to put on the white robe. These sounds subsided to a great extent as the severity of winter increased, perhaps indicating her assent for some time, but were heard again intensely in early spring before the breaking of the Lake. About a month after the Lake and her feeders froze (excepting at the mouth of the Ding tso and the Tag, and near Chiu Gompa), I had recorded that the level of the water in the Lake fell down by over 12 inches below the ice, which consequently, under its own weight, cracked with tremendous sounds and fissures were formed. The level of the water in the Lake must have fallen down still further, later on in winter, which I could not note and record. These fissures or chasms which are 3 to 6 feet broad, partition the entire Lake, so to speak, into a number of divisions or compartments. Within a day the

¹ In 1944, the Lake was frozen between January 9-12 (*Panshya Shukla Chaturdasi*).

² (1910) Vol. II, p. 180.

water in the fissures freezes again and breaks, with the result that slabs and blocks of ice pile up to a height of six feet. Sometimes these slabs and blocks pile up loosely over the chasms and sometimes they are cemented to either side of the fissure. Such kind of fissures and eruptions are also formed along the shores just near the edges or a few feet inside the Lake ; and these I name ' coastal eruptions ' in contradistinction to the main fissures in the Lake. Later on, when the Lake melts in the month of May, it breaks along these fissures. The disturbance beneath the ice due to hot springs in the bed, may also be the cause of cracks, sounds, and huge fissures in Manasarovar.

Afraid of the cracks and sounds and also on account of the danger of going down into the Lake due to explosions and fissures (called *mayur* in Tibetan) none dares to go on the frozen Manas even on foot. In spite of the warnings given by the monks I went into the Lake for over a mile in order to cross it from Chiu to Cherkip Gompa. All of a sudden I was face to face with a big fissure-eruption with blocks of ice loosely piled up to a height of 5 feet. As I was unprepared for the situation I had to cross the fissure at great risk and with utmost difficulty. Before reaching Cherkip I had to cross one more fissure-eruption and one coastal eruption. At that time I was reminded of the line that " The greatest pleasure in life lies in doing what people say you cannot do " (Bagehot). But if one is well equipped, one can cross the frozen Lake in the early hours of the day in mid-winter.

LAKES MANAS AND RAKSHAS—A CONTRAST

It is different with the Rakshas Tal. Loaded sheep, yaks, and ponies and even men on horseback

cross the frozen Rakshas Tal from east to west and from south to north. The absence of major fissures and eruptions here may be due to the fact that the water that percolates out of it by subterranean paths is being compensated for by the supply of water into it from its eastern neighbour, the Manas, through underground waterways. There is no appreciable void created beneath the ice between it and the water in the Rakshas Tal and hence perhaps there are not many fissures and eruptions in it. There are no doubt a good many coastal explosions and eruptions and a few minor fissures here and there. I actually crossed two small fissures, one foot broad, while visiting the islands in the lake on April 15 and 16, 1937. I was, however, told by an old Tibetan that rarely once in 8 or 10 years, a good number of fissures make their appearance even on the frozen Rakshas Tal. Both the Manas and the Rakshas freeze into pure white opaque ice in the beginning and within a month or so it becomes transparent greenish blue. The thickness of the frozen ice ranges from 2 to 6 feet near the banks, as far as my observations go.

Unlike Manasarovar, Rakshas Tal freezes 15 to 20 days earlier and melts again 2 to 4 weeks later. It may be mentioned in passing that this is quite the opposite of what Sven Hedin relates, namely that "Langak-tso breaks up half a month before the Tso-mavang."¹ Rakshas Tal froze about 20 days earlier and broke up again nearly a month later. There are many major and minor fissures and coastal eruptions in the frozen Manas, whereas the Rakshas contains only a few fissures and good many coastal eruptions. Another

¹ 'Trans-Himalaya', Vol. II, p. 180.

point of difference between the two lakes is that it takes about a week for the Rakshas Tal to freeze completely and a little more than that time to melt again completely. Sheets of ice are seen floating and drifting from side to side in the Rakshas Tal for several days even after the breaking of the Lake, so much so that the Bhotia merchants going early to Tarchhen Mandi (Kailas) oftentimes notice sheets of ice floating in Rakshas Tal, but not in the Manas. I noticed, and Tibetans too affirm, that the Rakshas Tal region is much colder than the Manas area and that there are greater and more massive deposits of snow all round the Rakshas. Also, the zebra-like formations of snow in well-marked stripes in the ups and downs, in the valleys, especially on the south and west in winter, and in the islands and irregular shores with bays, gulfs, promontories, peninsulas, straits, isthmuses, rocky shores, etc., lend an additional element to the picturesqueness of the landscape around the Rakshas. Indeed, Rakshas Tal would form a good model for learning geographical terms. The Manas is nearly 300 feet ¹ in depth, whereas the Rakshas is only half as deep on the northern side; on the southern side it may be deeper but has not been sounded up till now. The Manas has eight monasteries and some houses on its shores and the Rakshas has only one monastery, Tsepgye ² on the north-west and the only house of the *goba* of Shungba on the west. The area of the Manas is 200 square miles and that of the Rakshas 140 square miles. The coasts of the Manas are more regular than those of her western companion. Rakshas Tal

¹ The maximum depth recorded by Dr. Sven Hedin in 1907 was 269 feet.

² Also pronounced 'Chepge' and 'Chepgye'.

is in no way inferior to Manasarovar in physical beauty; but from the spiritual point of view the Manas is unparalleled. An interesting observation which is a bit difficult to explain, is the temperamental difference between the two lakes though they are next-door neighbours to each other possessing areas almost of the same order of magnitude. Unlike Manasarovar, there are no high mountains on the southern shore of Rakshas Tal to prevent the winds coming from the south. It may be due to this that Rakshas Tal is more stormy and colder than Manasarovar. The comparative shallowness of Rakshas Tal may also be responsible for its shores being colder than those of the Manas and for its freezing earlier and melting later.

Sven Hedin writes, "In winter the surface of the Tso-mavang falls 20 inches beneath the ice, which consequently is cracked and fissured, and dips from the shore; but Langak-tso sinks only one or two-thirds of an inch. This shows that it receives water constantly from the eastern lake, but only parts with a trifling quantity in winter."¹ Seven Hedin was on the lakes during the months of July and August but not when they froze; and so this whole information about winter must be hearsay from some of his Tibetan guides or servants, who certainly gave him wrong information. When the Rakshas receives water continuously from the Manas but parts with only a trifling quantity, what becomes of all the 20 inches of water that filters out of the Manas? If, as Sven Hedin describes, only a trifling quantity of water is filtered out of the Rakshas, the level of the water in it must rise. But in the same breath he says that water in

¹ 'Trans-Himalaya', Vol. II, p. 180.

the Rakshas fell down by one or two-thirds of an inch! Could Sven Hedin expect such accurate figures from the ordinary Tibetans who gave the figures of the levels of water in the Manas with discrepancies of several feet? So, contrary to what Sven Hedin writes, I maintain that it is not a trifling quantity of water that Rakshas Tal parts with, but almost as much quantity as it receives from the Manas either by subterranean passages or otherwise, through the so-called 'old bed of the Sutlej'.

PECULIAR SURFACE PHENOMENA

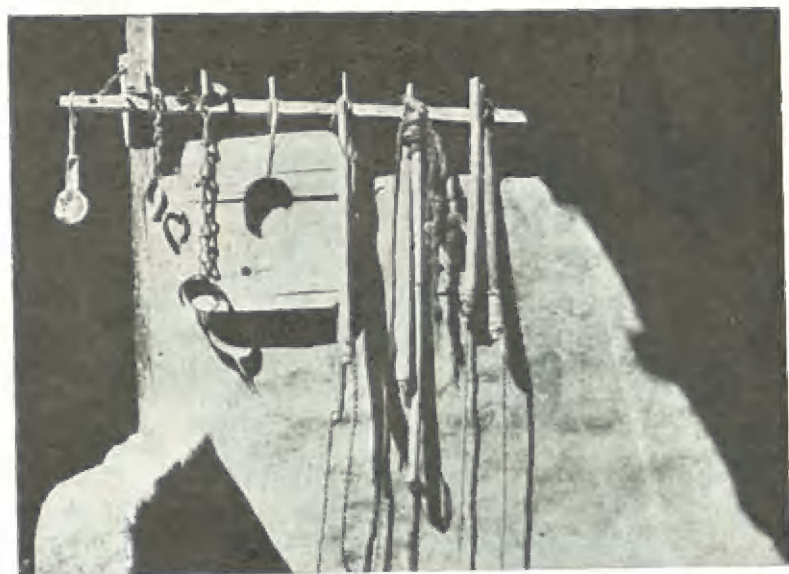
A series of peculiar phenomena takes place on the frozen lake of Manasarovar which it is impossible to describe fully. In one corner towards the south of the Nimapendi, the ice on the Lake cracks, and innumerable glassy panes of ice 2 to 4 tenths of an inch in thickness are hurled out into heaps in a minute as if by magic. From Thugolho to Tseti tso, due to coastal explosions huge blocks of ice 20 to 50 cubic feet in volume get hurled and cast ashore to distances ranging up to 60 feet, some of which take nearly a month to melt away, after the breaking of the Lake. Due to coastal explosions blocks of ice 3 to 4 feet thick rise like embankments 10 to 21 feet broad and 6 to 9 feet high, continuously for distances of hundreds of yards, only to collapse suddenly like so many packs of cards on some evening due to waves of quakes caused by subterranean disturbances, startling and confounding the *kora*-pilgrims, who might be moving slowly along the shores, unmindfully telling their prayers on the beads of their rosaries. These blocks of ice are irregular in shape from Thugolho to Shushup tso and regular up to

Gossul. From Gossul to Tseti tso there are piles of perfectly plane slabs 1 to 2 inches in thickness. From Tseti tso to the volcanic rock-projection of Malla-thak there are irregular heaps of ice mixed with the shore-drifted soft water-reeds. At the Malla-thak, at the mouth of the Gyuma chhu, and at some other places water is frozen into crystal-clear transparent greenish-blue ice, right down to the bottom, exhibiting the pebbles, sands, and water-reeds, and the active live fish in the depths of the Lake, as through the glass cases in an aquarium.

A quarter of a mile beyond the volcanic rock-projection, about 50 yards from the shore, there was an oval patch of water 30 feet in diameter in the frozen Lake, on January 28, when the minimum temperature in the verandah of the room was 20°F. and when the entire Lake was covered with ice 2 to 6 feet thick. Two scores of brahminy ducks were merrily swimming and playing in the pool and on the ice near by. This makes me conclusively believe that there must be some hot springs in the bed of the Manasarovar. On the south of this pool of water two scores of birds were frozen alive and sandwiched in the Lake. For about 2½ miles from here the surface of the Lake is almost plain, with some blocks of ice here and there, and then up to Chang-donkhang there are huge blocks of all types. From Chang-donkhang up to the mouth of the Gyuma chhu there are series of parallel banks of white opaque ice, one foot high and three feet apart and running into the Lake for half a mile like the furrows in a potato field. These parallel banks make an angle of about 50 degrees with the shore towards the south-east. At the mouth of the Gyuma chhu hundreds of fish, big and small, are frozen to death in a swimming posture, which could be seen clearly

through the transparent ice. From the Gyuma chhu to Sham tso there are fine models of regular mountain ranges with peaks, valleys, passes and tablelands all of opaque-white ice not exceeding eight feet in height. In one of the rounds of the Lake I mused myself like a school-boy for full two hours in these ranges to find out the likeness of the various peaks of the Himalayas. I could find in these ranges varieties of peaks—pyramidal, conical, tetrahedronal, trapezoidal, slant, steep, wedge-shaped, hood-like, wall-like, spade-like, club-like and so on—of course not in the same order as in the Himalayas and other ranges. From Sham tso up to the mouth of Gugta, it is a vast field of ice with marks exactly resembling the hoofs of yaks, and horses, as in a rice-field made ready for plantation by several bullocks. As a matter of fact, in my first winter-*parikrama* of the Holy Lake I mistook them for the footprints of wild horses and yaks. There is water almost all the year round at the mouth of the Gugta; and for a mile beyond this place, one sees beautiful formations of ice, like coral-reefs. From here up to Thugolho could be seen all varieties of formations and eruptions without any special features at any particular place, excepting at the mouth of the Nimapendi. Mostly between the mouths of the Gyuma and the Tag, all along the edge of the Lake, there is a fine footpath of ice, 6 to 10 feet broad where beginners can practice skating and where I used to slide on merrily.

Besides these, I would just mention a few more interesting features of the frozen Manas and then proceed to the breaking of the Lake. Now and then the ice on the Lake bursts forth and fountains of water gush out and small pools are formed temporarily on the ice, only to be frozen hard during the night; but such pools form-



16 Articles of Punishment kept in the Zong (Fort) [See p. 127]



17. Double-panniers of Borax and Salt by the side of a *Dokpa* Tent
in Taklakot Mandi [See p. 120]



19. This is how she Dresses her Hair
[See p 8]



18. A Shepherd Woman from Hor District,
Manasarovar [See p 8]

ed in early spring are of bigger dimensions and do not freeze again to welcome the early-coming adventurous pairs of swans. In some corner thousands of white needles and pins, flowers and creepers of various designs form under and over the transparent greenish-blue ice. Occasionally one sees several regularly-beaten white foot-paths and lines on the entire surface of the transparent Lake, which vanish also in a night in an equally mysterious way. These may be termed 'miniature fissures,' though there are no chasms. When the Lake breaks, the bigger sheets of ice collide with one another and split up into small pieces along these paths and lines. Sometimes it is one white sheet of ice from edge to edge and sometimes the whole Lake becomes turquoise-blue with innumerable geometrical lines, diagrams, and designs. When there is a fresh heavy snow-fall, the whole surface becomes pure white. The ice near the coasts bursts sometimes, and huge blocks of ice are pushed on to the shores up to 24 feet with heaps of small pebbles, big stones, sand, etc., from the bed of the Lake. Sometimes massive blocks of ice are bodily lifted and hurled from the bed of the Lake on to the shore, carrying with them small pebbles, big stones, mud and sand. These blocks of ice melt away in spring and the pebbles, stones, sand, etc., are left in heaps or spread in beds on the shores, which conspicuously stand out different from those on the banks. When pilgrims go there in summer, they are perplexed to see the materials from the bed of the Lake on the shores at such distances from the edge.

CHAPTER III

MELTING OF MANASAROVAR

EARLY PREMONITIONS

The breaking of ice and its melting to clear blue waters are even more interesting and awe-inspiring sight than the freezing of the Lake. A month before thawing sets in, along the west and south coasts, at the mouths of the Ding tso and the Tag, ice melts and forms a fine and picturesque blue border, 100 yards to half a mile in breadth, to the milk-white garment of the Lake. Here and there are seen pairs of graceful swans majestically sailing on the perfectly smooth surface of that border setting up small ripples on either side of their course. Especially in the mornings they do not play in the waters or engage themselves in 'belly-filling' but sail calmly towards the sun with half-closed eyes in a meditative mood and at the same time enjoying a good sun-bath. One such sight is a hundred times more effective, impressive, and sufficient to put one into a meditative mood than a series of artificial sermons, meditation classes, or got-up speeches from a pulpit. So it is that our ancestors and *Rishis* used to keep themselves in touch with Mother Nature to have a glimpse of the Grand Architect. Small sheets and pieces of ice are also seen drifting in the blue borders, with a flying couple of swans resting on them now and then, or a couple briskly pruning their feathers after a good swim in the ice-cold water.

About 11 days before breaking, the disturbance in the Lake becomes most intense between 6 and 10 a.m. and terrible sounds, rumblings, groanings, crashes resembling the roars of lions and tigers, trumpets of elephants, blowing up of mountains with dynamites, and firing of cannon are heard. One can hear notes of all sorts of musical instruments and cries of all animals. The agitation and the sounds are, in all probability, due to the ice tearing itself off and breaking asunder both in the fissures and minor lines of cleavage, for, the chasms in the main fissures are seen 50 to 80 feet broad with blue waters. The white ice-garment on the Holy Lake presents a fine and beautiful spectacle of a huge Bengali *sari* with broad blue borders both at the edges and in the middle. Nine days before the breaking of the Lake, the coastward sheets of ice, ranging in length from a few yards to half a mile, get isolated from the main sheet of ice along the fissures and other lines of cleavage and are drifted by winds mostly to the western, southern, and parts of the eastern shores, to be stranded there in part, depending upon the way and velocity with which they approach the banks. The remaining portions of sheets which still remain floating in the Lake dash against each and break to pieces; the smaller sheets melt away in a day and the bigger remain for a few days more near the shores, sharing the fate of others. When these sheets of ice drift towards the shores in the evenings, they appear to be moving very slowly but their velocity can very well be perceived when they are partly stranded on the shores to lengths ranging from 6 to 90 feet. It is thrilling to see the lightning rapidity with which these torn pieces of ice get up the shores with great grating noises. These are stranded on the shores either as 1 to 2 feet thick

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sheets or in heaps 2 to 6 feet high or in smaller heaps of smooth thin glassy sheets. It is rather curious to note that the stranded sheets of ice break up into small and big brick-like pieces, the sides of which resemble the sides of pieces of mercury sulphide.

FINAL BREAKING OF ICE IN THE LAKE

After thus exhibiting a series of interesting and versatile transformations, the whole of the remaining Lake all of a sudden, one night, breaks into a clear beautiful and charming blue expanse to the surprise and joy of the villagers and pilgrims on the shores, the next morning, who immediately climb up to their house-tops and hail the vast expanse, extending before them even like the very sky overhead; they show the same enthusiasm as they do when they find her frozen in winter, hoisting coloured flags, burning incense, telling prayers, and exclaiming words of praise to the gods in heavens. Tibetans believe that the Holy Manasarovar breaks on the full moon or new moon day or on the 10th day of the bright or dark half of the lunar month. But contrary to their traditions the Manas broke on the 12th day of the dark fortnight—*Vaishakha Krishna Dvadasi* according to North Indian almanac and *Chaitra Krishna Dvadasi* according to South Indian calendar, corresponding to May 7, in the year 1937.¹ One forgets himself for hours together gazing at the beauty, charm, and grandeur of the oceanic Lake, teeming with pairs of graceful swans here and there merrily tossing up-and down the waves. On account of the high waves dashing against one another, illusory pairs of white foamy

¹ In 1944 the Lake melted on May 1 (*Vaishakha Shukla Navami*).

swans make their appearance, which it is very difficult to distinguish from the real ones. When the Lake broke finally, some bigger sheets of ice remained unmelted and were drifted to the north coast which also eventually collided against one another on account of severe winds and broke to pieces and melted away within three days in the blue depths.

Two or three weeks before the Lake breaks, a peculiar change occurs in the texture and hardness of the ice. What could not have been struck and broken into smaller pieces even by means of crowbars in winter, now becomes so brittle that a blow with a stick breaks it up into small pieces. The sheets of ice that have drifted and piled up on the shores (during the week before the breaking of the Lake), when kicked, crumble down to small crystals like those of saltpetre. When I would go out for a walk in the evenings, I used to knock down several such heaps of brittle ice and amuse myself as they crumbled down into tiny crystals to melt away in a couple of days. One cannot get a solid piece of hard ice, as big as a cocoanut, from any of these heaps; but some of the huge blocks of ice that are hurled and piled up on the shores by coastal explosions during winter, cannot be moved by half a dozen strong men and exist for as many as 20 to 30 days after the breaking of the Lake.

EPILOGUE

Now with waves rising up to the sky and roaring as in an ocean, and now presenting a perfectly still clear-blue sheet of water mirroring the moon and the stars and the Kailas or the Mandhata; now like a sheet of gold in the morning sun, and now like a mass of

molten silver in the full moon light ; now rocking the Kailas and the Mandhata on her gentle ripples as in a cradle ; now calm, serene and silent even like the space beyond, and now disturbed and roaring, dashing and lashing the shores ; sometimes raising tempestuous winds flinging even the sheep and goats in the surroundings ; now a beautiful blue and now a hard white mass, Lake Manasarovar, with her hundreds of *Avataras* and myriads of changing forms, offers an enigma to the puny self-conceited human being to think, meditate, and perhaps ultimately fail to comprehend all these. All hail, Oh Manas!! Lake of the Royal Sages and Swans!! Victory to Thee!!!

EXPLORATION IN TIBET

PART II

KAILAS-MANASAROVAR REGION

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20. Yak with a Pack-saddle

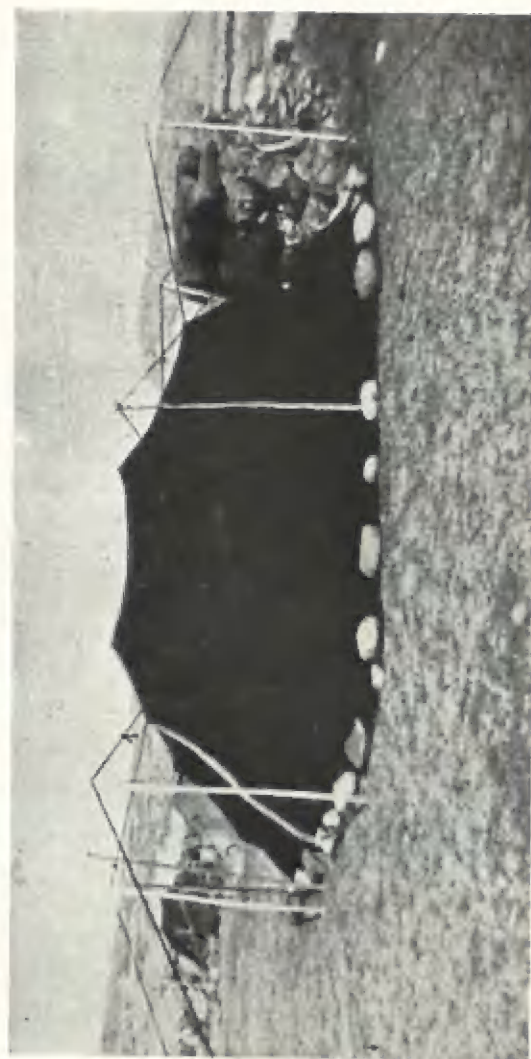
[See p. 116



21. Ploughing with a Jhabbu and a horse

[See p. 116





22. Tibetan Black Tent

[See p. 78]



CHAPTER I

PHYSIOGRAPHY

TIBET

Tibet was originally called *Bod-yul*, later on *Both*, *To-both*, *Tu-both*, *Ti-both*, and finally *Tebet*; hence the modern name Tibet. Even now Tibetans call the country *Po*, *Both*, *Bod*, or *Chang-thang* (northern plateau) although there is a separate province called *Chang-thang* in Tibet.

In Sanskrit literature Tibet is known by the names *Kinnara Khanda*, *Kimpurusha Khanda*, *Trivishtapa*, *Scarga Bhoomi*, or *Scarna Bhoomi*. In ancient times Tibet on the north, *Burma (*Shree Kshetra*), Siam (*Kamboja Rashtra*), and Indo-China (*Malava* or *Amaravati*) on the east, Malaya, Sumatra (*Scarna-Dvipa*), Java (*Yava-Dvipa*), Borneo, Vali, and other islands on the south-east, Ceylon (*Lanka*) on the south, and Afghanistan (*Gandhara*) on the west, were a part of Greater India and have been closely connected with it religiously, spiritually, and culturally.

Tibet is the loftiest tableland in the world ranging from 12,000 to 16,000 feet above the sea-level, with mountains covered with eternal snows. It has an area of 814,000 square miles with a population of about 3,000,000 to 5,000,000 (?) and with habitation even at a height of 17,000 feet above sea-level. The major part of the country is mountainous, bleak, and barren excepting a few valleys here and there. There are, however, good many forests in the regions adjoining

Indian borders, especially the Central and the Eastern Tibet. There are several salt-water lakes like Koko Nor and Tengri Nor and freshwater lakes like Tso Mavang and Langak Tso. Koko Nor is the biggest of the Tibetan lakes with an area of about 1,630 square miles. Some of the biggest and most famous rivers like the Hwang-Ho, Yangtse-Kiang, Brahmaputra, Indus, Sutlej, and Karnali, take their rise here.

The Capital of Tibet is Lhasa (12,090), situated on the right bank of the Kyi chhu, and has a population of nearly 50,000, half of which are monks. Shigartse and Gyantse are the next biggest towns with a population of 25,000 each. The population of Tibet is concentrated in the Brahmaputra valley where there is a good cultivable land.

KAILAS-MANASAROVAR REGION

Tibet can roughly be divided into five divisions : (1) Western Tibet or Ngari-Korsum, extending up to Ladakh on the west and up to Tradum Tasam beyond the source of the Brahmaputra, (2) Central Tibet, comprising of Tsang, Yu (U), Lhonak, and Kongpo (Lhasa and other biggest towns are situated in this division), (3) Eastern Tibet or Kham (herein is situated the famous Monastery of Derge, noted for its bronzes): most of the parts of this division are under *Gyalpos* or Chiefs, (4) North-Eastern Tibet or Amdo or Koko Nor (herein is situated the famous Monastery of Kum-bum of one lakh images), and (5) Northern Tibet or Chang-thang extending up to the Chinese Turkistan on the north. As a matter of fact a large part of Eastern Tibet and Koko Nor are under China and the boundaries of Tibet are not well demarked. (See Map No. 5).

Ngari-Korsum or Western Tibet originally consisted of three Provinces namely Ladakh, Shang-Shung or Guge (west of Manasarovar), and Purang; but in the year 1841 Ladakh was annexed to Kashmir. Kailas-Manasarovar Region is situated in the south-eastern part of Ngari, of which Purang is a part.

Based upon the Tibetan and Hindu traditions and certain geographical factors, I name the region round about Kailas and Manasarovar 'Kailas-Manasarovar Region', 'Kailasa Khanda', 'Kailas Region', 'Manasarovar Region', 'Manasa Khanda', or 'Manas Region'. The extent of Manasa Khanda is up to Tuksum Tasam on the east, Indian borders on the south, Sib chhu on the west, and Gartok and the source of the Indus on the north; though the Greater Manasa Khanda would include the tract up to Chhabrang Zong. This Region is nearly 200 miles long from east to west and 100 miles broad from north to south.

MOUNTAINS

The Kailas, Gurla¹ Mandhata, Surange, and Kanglung are the chief mountain ranges in the Kailas-Manasa Region. Zaskar Range is on the southern boundary of the Region. The highest peaks are Gurla Mandhata (25,355; 22,650; and 22,160 feet) and Kailas (22,028).

RIVERS

The sources of the Sutlej, Indus, Brahmaputra, and Karnali are situated in this Region. The Sib chhu,

¹ Go means head and lha means God; so Go-lha, Gorla, or Gurla means the abode of the highest tutelary deity, Sangdöl. The presiding deity of the highest peak of this range is Sangdöl, that of the second highest is Demchhog (same as Kailas), and that of the third peak is Tomba-Tangochen.

Chhu-Naku, Guni-yankti, Darma-yanti, Gyanima chhu, Langehen Tsangpo, Chornak, Missar chhu, Trokpo-nup, Trokpo-shar, Goyak, Chukta, Tsethi, Munjan, Bokhar, Langpoche, Par chhu, Gartong, Angsi, Kubi, Mayum, Kyang, Gurla, Baldak, Ringung, Garu, Dangechen, Gejin, Kangje, Lhalung, Chokro, Thitiphu, and Yangtse are the tributaries of the above four rivers. Besides these there are the rivers Dam chhu, Topchhen, Zhong chhu, Tarchhen chhu, Lha chhu, and Karleb chhu, coming from Kailas and falling into the Rakshas Tal; Tag, Nimapendi, Riljung, Riljen, Namreldi, Selung-hurdung, Gyuma, Kuglung, Lungnak, Palchen, Palchung, and Samo falling into the Manasarovar; Takkarpo and others falling into the Rakshas; and a few others falling into the Kongyu tso. Most of these rivers are dried up in winter and the remaining are frozen.

LAKES

The Manasarovar and the Rakshas are the two biggest freshwater lakes, of which the first is the deepest in Tibet. Kurkyal-chhungo, Ding tso, Sham tso, Gouri-kund, Nyak tso, and Tamlung are smaller freshwater lakes. The water of Shushup tso, Tseti, Gyanima, and Chhakra lakes is slightly brackish. Kongyu (Gunchhu) tso, Arkok tso, and Argu tso are salt-water lakes.

CLIMATE

The climate of Kailas-Manasarovar Region in particular and of Tibet in general is very cold, dry, and windy. Monsoon sets in late and rainfall is scanty; but when it rains it does in torrents. In summer all

streams and rivers flow very rapidly and sometimes become unfordable in the evenings due to melting snows. The sun is pretty hot in summer but it becomes very cold as soon as the sky becomes cloudy. During the pilgrim season (July and August), very often the Holy Kailas and the Mandhata Peaks would be enveloped in clouds and be playing hide-and-seek with the visitors. During the cloudy part and in nights it would be very cold. There will be tempestuous winds from the beginning of November up to the middle of May. Weather changes like the weathercock. Now you will be perspiring profusely in the hot sun and in a few minutes' time cool breeze will start to blow gently, the next moment you will have clouds with terrific thunder and lightning followed by drizzling rain or downpours of water in torrents; sometimes you will see a rainbow; shortly after, you may have a hail-storm followed by showers of snowfall. Here is the bright sun; a little further away a shower of rain; and further up lashing rains. Here is perfect calmness; the next moment there break out whizzing tempestuous winds. Now you are on the top of a mountain in the bright sun; below you see columns of clouds rising like smoke; and further down it is raining. Here on a conical peak the ice is glittering in the sun like a bar of silver; there on a dome-like peak are hanging golden canopies; the far-off mountain ranges are enveloped in thick wreaths of ink-black clouds; there appears a belt of amber clouds or the seven-coloured semi-circular rainbow encircles the Dome of Kailas; or the near by Mandhata's giant hoods are ablaze in scarlet flames when the sun begins to dip in the west; or the meagre snow-clad Ponri peak raises its head into the pitch-dark messen-

gers of Indra. Sometimes at sunset, the snow-clad massif of the Mandhata and the Kailas Range, silhouetted against the pitch-dark blue sky throws one into raptures. Here in front of you the rising sun pours forth molten gold on the azure expanse of the enchanting Lake, throwing you into a deep spell; there a far-off valley gives out thick fumes of sulphur under peculiar weather conditions, indicating the presence of big thermal springs. From one side warm winds give you a good welcome and from another valley shivering cold blasts attack you. Sometimes it seems that day and night, morning, noon, and evening, and all the six seasons of the year have their sway simultaneously.

Twilights are unusually long; that is to say, there would be plenty of light for nearly an hour or even more just before sunrise and after sunset. Due to very high altitude, and the consequent rarified and dust-free air, distant places and objects appear to be nearer. Sometimes, even when there are high waves near the shores of Manasarovar, the middle is smooth like a mirror reflecting the mountains or the midnight moon and stars. Sometimes huge roaring waves are seen dashing against the shores when there are apparently no heavy winds. Oftentimes one can note, from the heights on the shores, path-like bands in the Lake. The occurrence of these phenomena might be due to some hot or cold water currents, set up by the thermal springs situated in the bed of the Lake or due to some kind of tidal waves, though they may not be identical with the ebb and tide of the sea. The dark sapphire blue of the Tibetan sky is a blue so enchanting, tranquil, inspiring, and elevating in itself, that it can lull one into ecstasies.

FLORA

In some villages of the Lake Region the grass is smooth like velvet with a carpet of brilliant tiny flowers in rose, violet, and yellow colours ; at other places it is sharp and cuts like steel blades. In the upper parts of some valleys are countless designs of flowers of various hues, over which botanists could very well devote some time to find out new materials for research. On one side there is a sort of sweet-scented artemisia (*davanam*) used as incense ; on another side a different variety of incense creeper grows in still higher regions like the slopes of Kailas ; here and there are the prickly rugged *dama* bushes (a sort of juniper or furze) 2 to 3 feet high, which provide the people of these parts with firewood, since *dama* burns even when green and freshly cut. In the upper valley of Gurla chhu and in some other places, a variety of red-barked tree called *umbo* or *langma* grows to a height of 6 to 7 feet. *Pema*, a variety of deodar, 8 to 10 feet high, grows in Shar, the last village in Purang valley ; its leaves are used as incense. A variety of willow called *changma* is specially grown here and there in the Purang valley, but no big trees grow here which would yield timber, although poplars and other trees grow in some parts of Central and Eastern Tibet. So it is only the poet's stretch of imagination and the artist's stroke of brush that make Lord Shiva and Parvati sit under a huge tree at the foot of the perpetual snow-clad Peak of Kailas or under a tall deodar tree on the banks of Manasarovar.

A plant called *jinbu* or *jimbu*, the Tibetan onion, grows wildly in abundance near the hot springs of the Tag tsangpo, at Tirthapuri, Nabra, Dapa, Thuling, and

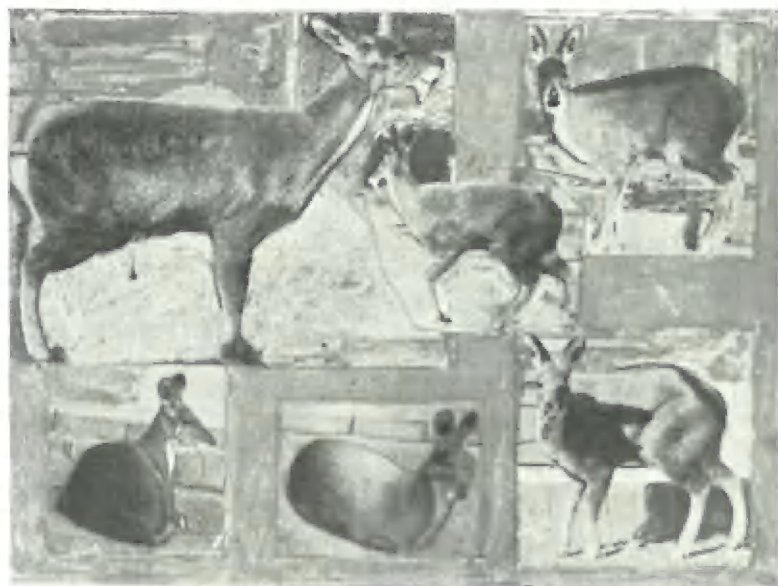
at several other places in Western Tibet. *Khampas* (Tibetans domiciled in India) carry hundreds of mule-loads of dried *jinbu* plant to India, where it is used for spicing dishes. *Jeera* is a wild growth in Kardung valley, Khochar, and other places. In the flats formed on either side of streams, in their lowermost course of almost all the beds of streams, a thorny bush, called *taruva* grows in plenty. This bush is a foot high and yields a yellow fruit called *tarchema* which is as big as pepper and is sour in taste. It is called *chook* in hill-districts and is used for *chutney*. Tibetan garlic (*gokpa*), *bathuva* (*lieu*), and *bichhoo-ka-booti* (*sannetle*) grow here and there. Rhubarb and aconite are seen growing in the upper parts of some valleys. An inferior variety of mushroom, both edible and non-edible, grows in the surroundings of Manasarovar.

A plant 2 to 3 feet high grows abundantly on the shores of Manasarovar, near Gurla, and at several other places. In the month of October its leaves turn red; so it is called *lal-buti* (red herb) by Indian merchants. Funnel-like layers of ice are formed at the root of this plant and they do not melt down in the sun, though the surrounding frost evaporates. Its root goes deep into the ground, which is used in typhoid and ordinary fevers with good results. In the valley of Thuglung in Senkora region, a drug by name *jinba-karpo* grows and its root is used in fevers by Tibetan *Vaids*. It is considered a mild type of poison and resembles *ati-risha*. Another drug by name *ser-chema* is collected from Lakar tso. The drug is like tobacco seeds. It floats on the surface of that lake and is used in dropsy.

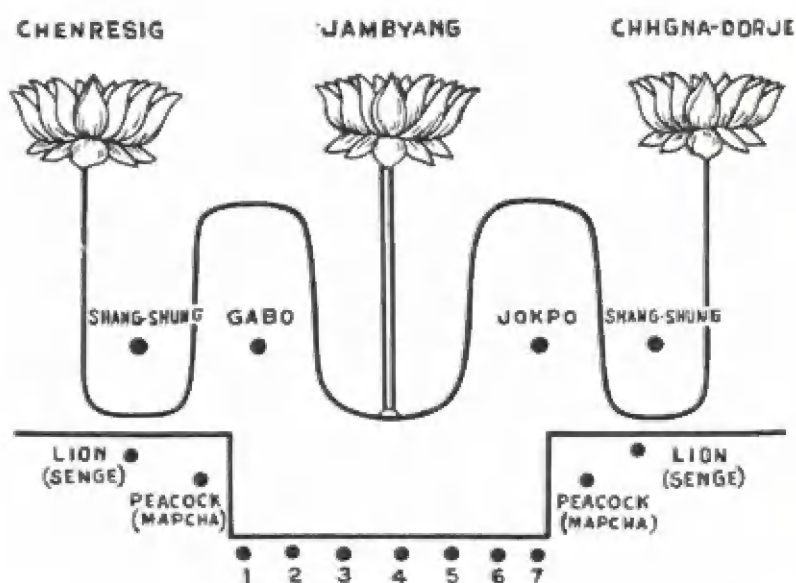
There are plenty of water-reeds in the Lake under the surface of water. Sometimes the smell of iodine is felt while going on the shores. So it is just probable



23 Wool-shearing at Thugolho, Manasarovar [See p 119]



24 Musk-deer in different Postures [See p 112]



25. The Bracket in Khochar Gumpa

(See p. 100)

that the reeds might contain traces of iodine, which should interest a chemist.

Here on the shores of Manasarovar I found out a wonderful drug called *thuma*. It is a marvellous specific for spermatorrhoea and an excellent aphrodisiac. *Thuma* is the root of a tiny creeper thriving at a height of 15,000 feet above the sea-level. It is not possible to collect even half a pound of it in a whole day. There is, however, an interesting way of procuring it. When the root is well ripe, wild rats collect and store it in their holes in the month of October for use in winter. The poor folk of these parts deprive the rats of their winter provisions. Just as *vidari-kanda*, a big tuber used in important medical preparations by *Kavirajas* or *Vaids*, is eaten as food by some of the wild tribes, so also this root is eaten by the poor as food for a few days. The well-to-do use it as a delicacy on special occasions like the New Year's Day. The claims of this drug may be verified and put to test by medical men.

CHAPTER II

GEOLOGY

GENERAL

The walls of Kailas Peak consist of conglomerate (rock composed of pebbles cemented together through the course of age and pressure), which is considered to be not later than the Eocene period, that is, 55,000,000 years old. The mountains of this Region in general and of Purang valley, those separating the two Lakes, and all those around Kailas in particular, mostly consist of conglomerate. The south and the western sides of Kailas consist of horizontally stratified conglomerate, but these strata are somewhat inclined on the eastern side. Huge granite boulders and crags border the path from Dira-phuk to Dolma la and down to Lham-chhukhir on the other side of the pass.

FOSSILS

Geology tells us that millions of years back there were no Himalayas and that the area now occupied by them was a huge sea, and that the Himalayas heaved up gradually in course of time and that they are still growing, and that they are the youngest though they are the highest in the world. Shells, snails and other fauna of the sea, animals, trees, leaves, and other things that remained embedded in the strata of earth have been in the course of millions of years petrified, yet maintaining the shape and structure of the

original. These petrified objects are called fossils ; they may be of sea or of land-fauna, of plants, leaves, nuts, fruits, bones, or any other organic substance or even footprints of animals. With the help of these fossils the geologist tries to link up the past with the present.

Shalagrama (शालग्राम), *shaligram*, or *saligram*, is nothing else but the marine fossil ammonite of the Jurassic Tethys. *Shalagrama* in Sanskrit language means petrified insect. So Hindus knew of the fossils long before the modern scientist deciphered it. Orthodox Hindus consider *shalagrama* to be the symbol of Vishnu and worship it as such. Several people believe that *shalagrama* contains gold but it is a mere delusion. The cause underlying this wrong notion is that some marine fossils contain iron pyrites which is pale yellow in colour, having the appearance of gold. This is mistaken by ignorant people both in the West and in the East as gold and hence it is also known as ' fools ' gold '. I had secured some such pyrites fossils from Kuti for the Benares Hindu University and the University of Calcutta in the year 1940..

Within my knowledge there are many marine fossils at Damodar-kund, Muktinath, Tinker, Lipu Lekh pass, Kuti, Mangshang pass, Darma pass, Kangri-bingri pass, Niti, Puling, and at several other places.

In the year 1942 I had brought a marine fossil-bed weighing 14 pounds from Tso Kapala, situated at the southern foot of Kailas Peak and sent it to the Geological Survey of India for examination. This is the first find of fossils from the Kailas Range. Here is the report : " The specimens are very hard and tough sandy limestone containing marine fossils belonging to the lamellibranchia, doubtfully referable

to the genera *Astarte*, *Ostrea*, etc. The general look of the specimens and the faunal assemblage indicate a probable Mesozoic age for the beds". Mesozoic period is 190,000,000 years old. In the years 1945 and 1946 I had brought some more marine and bone fossils and casts of fossils from Manasa Khanda which are awaiting examination. I had also discovered a huge marine fossil-bed on the *parikrama* of Kailas, about a mile before reaching the Dolma la. It may weigh anything between 120 and 160 pounds. In 1947 I collected 99 fossils from the Bongza Range in Central Tibet. This is the first collection of fossils from Central Tibet and the second find from Tibet. Besides these, I had collected some more fossils from different places in Western Tibet.

I gave some of the fossils I collected to the Geological Survey of India, for identification. The following is the provisional identification of the specimens, since some of them have been misplaced while in the Geological Survey Office. I am thankful to Mr. P. N. Mukherjee, Palæontologist, for the report.

No.	NAME	LOCALITY	AGE
1.	<i>Kellawaysites greppini</i> (A septate fragment)	Mangshang (Tibetan side of Kuti)	Already recorded from the Jurassic of Kachh
2.	Indet. Ammonite fragment	"	(?) Jurassic
3.	Indet. Ammonite	"	May be Jurassic
4.	<i>Belemnites cf. gerardi</i>	Anura (South of Manas)	Recorded from the Jurassic of spiti
5.	<i>Perisphinctes</i> sp.	Tinker-Lipu Lekh	Jurassic
6.	<i>Orthoceras</i> sp. (fragments)	Kuti	"

No.	NAME	LOCALITY	AGE
7.	Rhynchonella sp.	Bongza Range (Central Tibet)	Jurassic
8.	Fragments of Indet. Ammonites etc.	Sumnath (Tibetan side of Kungri- bingri pass)	"
9.	(?) Orthoceras in a rolled nodule	Tso Kapala (Southern foot of Kailas Peak)	"
10.	Fragmentary Ammonites	Puling (Tibetan side of Gangotri)	(?) "
11.	Indet. nodules	Damodar-kund	Unknown
12.	Indet. Ammonites in nodules and pebbles	"	(?) Jurassic
13.	Bactrites sp.	"	Devonian
14.	A doubtful Coral	Tso Kapala	Unknown
15.	Fossilised bone of a Bovid	Tsergye (west coast of Rakshas Tal)	Pleistocene

The general faunal assemblage of fossils identified under items 1 to 12 indicates a Jurassic age approximating to 130 million years.

The fossil specimen under item 13 indicates a Devonian age approximating to about 300 million years.

The last specimen under item 15 indicates a Pleistocene age approximating to one million years.

The yellow-looking cigar-shaped pyrites fossil embedded in a black rock and collected from Kuti is *Orthoceras*. It is an ancestor of the present *Nutilus*. It is of Jurassic age.¹

I have also collected a few implements of the stone age from Tag, Tseti, Chapgye, and other places in Kailas Region.

¹ Identified by Dr. Rajnath, Banaras Hindu University, for which I am thankful to him.

A hard substance *dugri*, called *bijli-ka-haddi* by Bhotias, is commonly used by Tibetan medical men. It is believed that it falls on earth through lightning. One of the specimens which I had examined contained a lot of silica and some alumina and calcium oxide. In 1943 I had procured another specimen which turned out to be a good fossilized joint of a bone ; so *dugri* is a bon-fossil.

THERMAL SPRINGS

There are three thermal springs on the Ganga Chhu about two furlongs from Manasarovar down the Chiu hill. One spring is on the right bank, one on the left bank (with a *kund* to take bath), and one boiling spring on a small rock in the middle of the Ganga Chhu, having temperatures of 115°, 135° and 170°F. respectively. There are some in the bed of the Manasarovar, especially $\frac{3}{4}$ ths of a mile south of the beginning of the Ganga Chhu (see p. 24). About 3 or 4 miles from the shores of the Manas, situated on the left bank of the Tag tsangpo, there are several hot springs at Nyomba-chhuten (mad hot springs), varying in range from lukewarm to boiling temperature, spread over a large area, out of which a regular stream of hot water flows into the Tag. Opposite these springs on the right bank of the Tag are some caves called Chhu-phuk, where a few monks live in winter. Just near the caves there are some *chhortens* and *mani*-walls and the foundation of an old ruined monastery, said to be of Guru Padmasambhava and pulled down by Zoravar Singh. Some shepherds of Nonokur camp here in early spring and autumn for a couple of months in each season. Near the caves and a mile down at

Ambu-phuk there are some more hot springs. About $\frac{3}{4}$ ths of a mile up Nyomba-chhuten, situated on the left bank of the Tag, there are some hot springs and some boiling and bubbling geysers. This place is called Tomo-mopo. About a mile further up this place, situated on the left bank of the Tag is the place called Pomo-phuk, where there are the ruins of a gumpa said to have been destroyed by Zoravar Singh. About 44 miles north-west of Manasarovar is Tirthapuri where there are some more thermal springs, near which the demon Bhasmasura is said to have been burnt to ashes. There are large deposits of calcium carbonate and other compounds of calcium all around the hot springs, which change their positions now and then and sometimes disappear too. There are several extinct craters near the monastery. There are a few more hot springs on the left bank of the Sutlej at Khyunglung, 15 miles down Tirthapuri. It is interesting to note that like the beads on a string, there is a series of hot springs on the Tag at Tomo-mopo, Nyomba-chuten, Chhup-huk, and Ambu-phuk, in the bed of Manasarovar, in the Ganga Chhu, at Tirthapuri, and Khyunglung.

There is a thermal spring of lukewarm water on the right bank of the Karnali, midway between Kardung and Taklakot ; and some extinct craters on the left bank of the river. There are some hot springs in the upper part of the Yangsé valley.

I feel that these hot springs and geysers, situated at a height ranging from 13,000 to 15,000 feet above the sea-level, have got a great radon content and possess radio-active properties. Patients suffering from rheumatism, lumbago, gout, dropsy, beri-beri, skin diseases, digestive disorders, and incurable

diseases, visit these springs and stay for some days using their water for bath and drink. Many are reported to have got good relief from the said ailments. Since the radon content and the radio-active properties of the water are often likely to be lost by the time they are brought to the laboratory in the plains, as it would take more than a month to be brought, those interested in the subject should go and analyse the waters on the spot. Since the Manas Region is full of volcanic and igneous rocks and remnants and extinct craters, the geologist would find a good deal of material for study.

MINERALS

Gold

Almost parallel to the Ganga Chhu at a distance of about a mile on the south there is a vein of gold deposits extending from the shores of the Manas right up to the Rakshas. They were mined about the year 1900, but nothing is being done now-a-days. During the last mining operation it is said that there had been an outbreak of small-pox which was attributed by the Tibetans to the wrath of the presiding deity of the mines and consequently the mining was stopped by the Government. During the last mining operation it is also said that one gold nugget as big as a dog (according to another version, a dog-like nugget) was found. At the place where the nugget was found a *chhorten* was constructed, called 'Serka-khiro' (gold-dog). This place is about a mile south of Chiu Gompa.

There are some gold mines in the district of Songkora or Sankora situated at a distance of a week's



26. Interior of Khochar Monastery
[See p 100



27. Image of Jambyang (Manjughosh) in
Khochar Gompa [See p. 100



28. Stucco-image of Prajñā-paramita and some
Frescoes in the background [See p. 101]



29. The Author in a Lama's Robes
[See p. 86]

march on the north-east of Manasarovar. Mining is done here mostly in winter. It is reported that gold is collected at depths ranging from 18 to 24 feet and that one collects 3 to 6 tolas of gold in the course of a season. The gold of this region goes to Gyanima and Chhakra Mandi for sale.

Some 15 days' march northwards from the shores of the Manas, leads one to the extensive and richer goldfields at Thok-jalung, Munak-thok, Rungmar-thok, Thok-aurakpa, and to several other places where they are being worked by the most primitive methods, scarcely worth the name of mining. Gold is found in nuggets and spangles in mines and dust in rivers. It is said that once a gold nugget weighing 525 ounces was dug from one of the gold mines. There are hundreds of gold washers in Tibet. In the year 1918, Tibetan gold was sold at the rate of Rs. 10 per tola at Lhasa, according to the account given by the Governor of Taklakot. It is the mining expert and the enterprising capitalist who can ascertain and find ways and means for exploiting these vast goldfields on up-to-date scientific methods and on a commercial basis and for exploring some more virgin gold and silver mines and other mineral wealth.

Borax

Lake Tseti tso, three miles north of Gossul Gampa, by the side of Manasarovar, has large deposits of borax and soda both on the shores and on the islands in it. The Tibetan Government has now stopped the working of borax at that place due to the superstitious belief that the mining deity has got enraged. But some of the white deposits are carried by the people in the surroundings and used for wash-

ing hands and clothes. In this connection it will not be out of place if I quote a paragraph from Sven Hedin. "It is curious that the freshwater lake Manasarovar could be suspected as being responsible for the Tibetan borax. The borax was known to come from Tibetan lakes, and as the Manasarovar was more famous than all other lakes in Tibet it was particularly mentioned as the place from where the borax was brought."¹ If we note that the lake Tseti is hardly half a mile from the shores of the Manas, that big crystals of borax were mined in large quantities from here, that this place is very near the borax-markets of Taklakot and Gyanima Mandi, and that the borax of other regions also comes to the markets of the Manas Region, there is nothing curious in the Manasarovar being suspected as being responsible for Tibetan borax. There are very big borax-fields at Langmar (about 140 miles from the Manas) in Western Tibet and at several other places where, in the year 1928, it was sold at the rate of 30 to 40 pounds per rupee or as much as a big goat could carry.

Other Minerals

There are several lakes in Tibet in which there are large deposits of salt. It is from these deposits that the shepherds bring large quantities of salt to various markets. The salt that comes to the mandis of Manasa Khanda is mostly from Arkok tso and Majin. Thousands of maunds of Tibetan lake-salt are sold every year to nearly half of the Himalayan region of India.

¹ 'Southern Tibet', Vol. II, p. 110.

Trisulphide and bisulphate of arsenic are found near Kungri-bingri pass, round about Chhirschin, and near Mangshang. These two compounds of arsenic are found in other parts of Tibet also. On the eastern shores of the Manas and Rakshas there is a violet-red sand called *chema-nenga* in Tibetan. It contains iron, titanium, and emery. About three miles south of Zuthul-phuk Gumpa, in Chhumik-ri (the rocks on both sides of Chhumik-thungtol),—and near Kungri-bingri pass, one comes across the *zaharmora* stone (serpentine) of white, red, rose, grey, and mixed colours. This is used by *Hakims* in Unani medicines. It is a soft and smooth stone with a hardness of 2.7. A similar stone of black variety called *thaneri-patthar* is found near Kungri-bingri pass. It is used for ulcers on the breast. Near Gurla-phuk, Lachato, on the south of Zuthul-phuk Gumpa, and at other places one could see exoteric rocks of peridotite which are in the process of turning into serpentine. Near Tsepgye, Khyunglung, and other places, quartz and calcium carbonate are found in crystalline form.

There are vast plains of soda and potash everywhere in Tibet, and near Gyanima, and Chhakra, and near hot springs in Manasa Khanda. Limestone is found in Purang valley, and tons of calcium carbonate deposits at Khyunglung, Tirthapuri, and at other hot springs. The white substance that is brought by pilgrims from the northern foot of Kailas as *vibhuti* contains calcium sulphate, calcium carbonate, and aluminium in small quantities.¹ Yellow and red ochre

¹ I am grateful to Mr. Sagarla Raju, M.Sc., Assistant Professor of Chemistry, and to Dr. Rajnath, Head of the Department of Geology, Benares Hindu University, for the interest they had taken in examining and analysing the minerals and other specimens brought from Kailas-Manasa Region.

are found at Tirthapuri, Tag chhu, Purang valley, and at other places with which monasteries and houses are painted. Best pottery clay is found near Riljung chhu, with which pots and tea-kettles are made at Thugolho. At several places beautiful slabs of black, grey, and pale greenish-blue alabaster-like slate and other stones are found everywhere on which Tibetans usually engrave their sacred *mantras* and scriptures.

Besides gold, silver, copper, lead, iron, coal, limestone, sulphur, mercury, *shilajit*, kerosene oil, and rock-salt are also found in different parts of Tibet. But they are all in virgin state now. At a distance of 3 days' journey from Gartok there are lead mines near Gemuk.

CHAPTER III

HUMAN GEOGRAPHY

PEOPLE AND DWELLINGS

The population of Manasa Khanda may roughly be computed at 10,000. People, both men and women in general, are strong, sturdy, and hard-working ; they have great power of resistance to cold and hardships ; they are primitive, cheerful, pleasure-loving, peaceful, religious-minded, very hospitable, contented, but dirty in habits and customs. Lamas and officers are highly cultured and polite. There is no caste system in Tibet. But the smiths are the only second class, with whom the rest of the society does not inter-marry or inter-dine ; so every Tibetan is the embodiment of all qualities, beginning from those of a priest to those of a sweeper.

It is only the Purang valley that is fairly populated with fixed abodes. These abodes are flat-roofed and are often two-storeyed, built of big sun-dried bricks and the little timber that they get from the Indian borders. The roofing is made of light timber and bushes, over which mud is spread. The comparative sparseness of houses in the Kailas-Manasa Region is due to the fact that transit of timber to their inaccessible regions, encountering difficult passes on yaks and ponies, is highly expensive. Sometimes, even two houses go to make a village. Their monasteries are built similarly but on a larger scale.

About half the population of the Region subsists on cattle-breeding especially of the yak, sheep, and

goat. They live in black tents made of yak-hair, and wander from valley to valley grazing their cattle.

A part of the population of Purang lives also in caves dug into the conglomerate walls of hills which are made into regular houses by constructing walls and gates in the front side. Some of the caves are even two- or three-storeyed high. Such houses are found mostly in Gukung near Taklakot, in the villages Garu, Doh, Ringung, Dungmar, Kardung, etc. Gukung is a typical cave-village situated on the right bank of the Karnali about half a mile from Taklakot Mandi. There is a gumpa also situated in a three-storeyed cave-dwelling. On the southern side of Manasarovar, situated in the uppermost part of the Namreldi valley, are some caves where the people of southern shores of the Manas took refuge in severe cold, when the Kashmiri General, Zoravar Singh, invaded the Manas Region in the year 1841.

The Deserted Cave-Colony of Pangtha (13,100): Five miles down Sibchilim Mandi, situated opposite the confluence of the Sib chhu and Tisum chhu is a huge wall of conglomerate. In it were dug out a few hundred caves, situated about 400 feet above the level of the river. They are all now empty and are encrusted with soot. Roughly speaking, the caves are in two terraces. On the upper terrace there is a big monastery belonging to the Sakya Sect (Red Cap Section). I visited this cave-colony on July 26 and 27, 1946, but was withheld by a huge landslip within a distance of 20 yards from the gompā. Inside the gumpa there are numerous fresco paintings; so when I would visit it next time I propose to bring some photos of these frescos and collect some historical data. When Khyunglung was in a flourishing condition all these

caves were occupied both by monks and householders. Even now-a-days a few shepherds come here for stay in winter and in early spring. I was given to understand that the monastery was in a flourishing condition between the 13th and the 14th century. Khyunglung is at a distance of about 12 miles from here.

FOOD AND DRESS

The staple food of the people is meat—fresh, dry, cooked, or roasted—, roasted barely powder (*tsampa* or *sattu*) and plenty of dairy products. In the morning and evening they take *thhukpa*, a semi-liquid dish, that is prepared by boiling *tsampa* and meat in water, with salt added to it. The people of the Purang valley eat rice and bread also, for rice and wheat are supplied in large quantities from Nepal and Indian borders. They use Chinese tea in large quantities. Tea is boiled for a long time, salt and butter are added, and churned thoroughly in big wooden cylinders. A small quantity of crude soda called *phuldo* or *seru-tsa* is put in it to emulsify it and not to allow the whole butter to float on the top. They drink 50 to 150 cups of tea throughout the day and in the night till they retire to bed, according to their means. They take *tsampa* made into a thick paste, by mixing with tea. *Chhang*, a light beer prepared from barely, is their national beverage, in which men, women, children, and monks indulge, more often on festive occasions. Tea and *chhang* are taken either in small wooden cups silvered or otherwise, in China cups or China-made stone cups by the rich, which are kept on silver stands with silver lids on.

The whole region being at a height of 12,000 feet above the sea-level is very cold ; and so Tibetans wear long double-breasted woollen gowns with a *kamarband* (waist-band, one foot broad sash). They wear woollen shoes, called *tham*, coming almost up to the knees, which they need not remove even while entering the *sanctum sanctorum* of the temples in the monasteries. In winter they wear coats, trousers, and caps made of sheep- or lamb-skins. When it is hot they remove one or both hands off the coat, thereby exposing the shoulders. Women wear almost the same kind of dress as men, with the addition of a horizontally striped woollen piece in the front, from waist down to the toes, and a tanned goat-skin on the back. Men freely use English felt-hats which are brought from Calcutta and other places and sold in their markets. Rich people, officers, and lamas wear costly dresses and silks.

SOCIAL CUSTOMS

Monogamy is common, but polyandry also is in vogue, most probably an economic adjustment to prevent the increase of population, where struggle for existence is very hard. So when the elder brother in a family marries a wife, she automatically becomes the wife to all the other brothers ; and all of them live together peacefully without any hitch. The wife is held in common, though the younger brothers form servants to the elder. So much so, the Tibetans today have only as many houses and families as they had centuries ago. Polygamy and child-marriage are not unknown. Marriage takes place with the mutual consent of the adult bride and bridegroom in consultation with their parents ; and the ceremony is



30. The Author in Tibetan Costumes [See p. 80]





31. Gukung, Cave-village near Teklakot [See p. 78]



32. General Zoravar Singh's Samadhi [See p. 135]

officiated by monks. Amongst widows and widowers the system of *niyoga* is common, each living in her or his house meeting in the night in the former's house, the woman being the claimant of the offsprings. Such issues have equal legal rights and social status as those of normal marriage. *Niyoga* may be of temporary character or permanent. Widow-marriage is very common.

Monks and nuns shave their heads and wear a sort of violet-red gowns, whereas householders both men and women plait their hair. Women dress their hair in several plaits. They enjoy full social liberty and equal status with men. As a mark of respect or salutation, Tibetans bend a little and throw out their tongues and say *khamjam-bho* or simply *khamjam* or *joo*. Monks take to all callings in life—Gurus, high-priests, corpse-cutters, officials high and low, traders, shepherds, servants, cooks, coolies, pony-drivers, shoe-makers, cultivators, and what not from the highest to the lowest—from Dalai Lama to an ordinary coolie.

The manner in which the higher order of monks blesses varies according to the status and social position of the blessed. The monk brings his head near the head of the other and gently touches it if he is also a high monk, or places both his hands on the heads of those he loves most, or to whom he wants to show a greater favour. In other cases he blesses with one hand, two fingers, or only with one finger. The last mode of blessing is by touching the head with a coloured piece of cloth tied to a short stick. The principle underlying in all the cases is that there should be some contact of the blesser and the blessed in order to pass some power of efficacy to the latter from the former, besides invoking the usual blessings.

Khatak is a loosely woven gauze-like or thin white cloth made of cotton or silk of various sizes, the smallest being a foot long and three inches wide and the largest a yard long and over a foot broad. The presentation of it is a mode of interchanging civilities. When a person writes or visits an officer, a monk or a friend, he encloses or presents a *khatak*. During marriages and on festive occasions this is presented. The non-observance of this custom is considered a mark of rudeness or lack of etiquette. This ceremonial scarf is given as a reverential offering to the deities in monasteries in place of a garland.

Tibetans have a peculiar way of killing sheep for meat. They suffocate the animal to death by tying the mouth and nostrils tightly with a rope, because it is enjoined in their religious texts that the blood of a living animal should not be spilt. While suffocating the animal they repeat the *māni-mantra*, so that its soul might get a human body in the next incarnation.

The dead bodies of well-to-do monks are cremated while those of poor monks and householders are hacked to pieces and thrown to vultures or thrown in a river if there is one near by. Both birth and death ceremonies are many and complicated, varying with the individual means and are much akin to those of the Hindus. When the dead body is cremated, the ashes are mixed with clay and moulded into a small pyramid which is kept in a monument known as *chhorten*, corresponding to the *stupa* or *chaitya* in India. The *chhorten* is symbolic of the five elements—the lowermost cubical part represents earth, the spherical part over it represents water, the triangular part above it

represents fire, the crescent form over it represents air, and the moon over it represents ether.

RELIGION

Advent of Buddhism into Tibet

Buddhism was first introduced into Tibet during the time of King Srongchen Gampo, who reigned from A.D. 630-98. It flourished for several years under the royal patronage. Beginning from the ninth century A.D. up to the middle of the seventeenth century, great *Acharyas* like Shantarakshita of Nalanda University, Guru Padmasambhava, Deepankara Shreejnana of Vikramashila University (eleventh century) and a host of other Pandits and Teachers from India, went to Tibet and preached Buddhism, besides translating several Sanskrit, Pali, and other works into Tibetan. The religion of Tibetans is primarily Buddhism with a queer admixture of *Tantricism* or *Saktaism* and the old *Pon Dharma*—pre-Buddhistic devil-worshipping religion of Tibet. Tibet is predominantly a priest-ridden country and as such some Western writers call the religion of Tibet, *Lamaism*. One or two children from every family are initiated into the order of monks and nuns at the age of two or three. Nearly one third or one fourth of the population are monks and nuns.

Different Schools of Buddhism

Buddhism prevalent in Tibet is of the *Mahayana* School. There are ten different schools or sects now prevalent in Tibet: (1) *Ngingmapa*¹ of the eighth

¹ *pa* means one belonging to

century was first introduced into Tibet by Chinese monks. This school is prevalent in Bhutan, Western Tibet, and Ladakh. Several books of this school are not present in *Kanjur* and *Tanjur*. (2) *Urgyenpa* of the ninth century. This school is prevalent in those parts that are adjoining Nepal borders. Buddhists of the Himalayan tracts in India are the followers of this sect. Samye in Central Tibet is the chief monastery. They worship *Urgyen* or Padmasambhava. (3) *Kadampa* of the eleventh century. They are the followers of Domten, the principal disciple of Deepankara Shreejnana (*Atisha*). The followers of this school do not strive much for the attainment of higher rungs of spirituality. (4) *Sakyapa* of the thirteenth century. The monks of this and the above three sects put on red caps, as such they are named by lay writers as Red Caps or Red Cap Sect. Their chief monastery is Sakya Gompa¹ and is situated in Central Tibet.

(5) *Gelukpa* (reformed sect) or *Gandenpa* of the fourteenth century. Chonkhapa was the founder of this sect. Ganden is their principal monastery. The followers of this school are the greatest in number. (6) *Kargyudpa*. The followers of this school believe only in *Do* or *Sutra Granthas*. They do not work for higher attainments. (7) *Karmapa*. The followers of this sect believe in the efficacy of *Karma* or action. (8) *Dekungpa*. Dekung is their chief monastery. *Kargyudpa*, *Karmapa*, and *Dekungpa* are only the offshoots of Gelukpa; as such they are the part and

¹ I received an invitation from the abbot of this monastery in 1946, never before accorded to any Indian in recent times. One riding pony, two luggage yaks, and two servants were sent to take me, but I could not go due to my other engagements. It is from this monastery that the Buddhist scholar Shree Rabula Sankrityayana brought several Sanskrit manuscripts.

parcel of that school. The monks of all these *Gelukpa* Sects put on yellow caps. So they are, by lay foreigners, called Yellow Caps or Yellow Cap Sect. (9) *Dukpa*. The followers of this school worship *Dorje* (*vajra* or diamond, thunderbolt) which, they believe, has fallen from heavens at Sera Monastery. Sera is their principal monastery. These are the followers of *Tantra Marga*. *Shunya* or void is a thing which cannot be destroyed, cut or burnt, so is *Dorje* or *Vajra*. Hence *Dorje* is a symbolic representation of *Shunya* or *Nirvana*. (10) *Ponpa* or *Penbo*. This is the religion prevailing in Tibet before the advent of Buddhism. But now these have adopted several things from Buddhism and worship the Buddhistic deities. They go to Buddhist monasteries but do anti-clockwise rounds of the holy places. The monks of the Red Cap Sect need not necessarily be celibates and can openly marry if they choose or keep a woman. As a matter of fact one of the two abbots of Sakya Gompa is a married person, but monks of the Yellow Cap Sect are expected to be celibates and if any monk marries openly, he shall have to pay very heavy fines to the monastery to which he belongs. When not in the monastery, monks and nuns live freely, but cannot marry openly, though sometimes nuns are seen with babes in their laps. Since monks and nuns are initiated into the order at a tender age, when they have absolutely no idea of the austere life they are to lead, it is no wonder if they do not have a high standard of morality. It is the system which is at fault rather than the individuals.

Gompa or Monastery

Most of the monks are attached to the monasteries called *gompas*¹ (solitary places). Gompas are a combination of a temple (where the image of the Buddha and other Buddhistic deities are kept and worshipped), a *math* (where monks have their lodging and boarding), and a *dharmashala* (where travellers and pilgrims get a lodging place). The first monastery in Tibet was built between A.D. 823-35 at Samye (about 30 miles south-east of Lhasa) on the model of Udantapuri University at Bihar Shariff, 6 miles from Nalanda or on the model of Nalanda itself. Bigger monasteries also serve the purpose of schools and Universities and are big educational centres.

(1) Depung (rice-heap)^{*} Vihara is situated two miles west of Lhasa and was founded by the great reformer Chonkhapa in the year 1416. This was constructed on the model of Shree Dhanyakataka University, situated near the Amaravati Stupa on the bank of the river Krishna. The traditional number of monks in this monastery is 7,700 though there are actually 10,000 monks at present. This is the biggest residential University and monastery in the world. (2) Sera monastery is two miles north of Lhasa and was founded in 1419. The traditional number of monks in this monastery is 5,500 though there are actually more than 7,000 in it. This is the second biggest monastery in the world. (3) Ganden Monastery is about 35 miles east of Lhasa and was founded by Chonkhapa himself in 1401. These three gompas are said to be the three pillars of Tibet. (4) Tashi-

¹ Also pronounced 'gonpa'.

Lhunpo was founded at Shigartse in 1447. The traditional number of monks in Ganden and Tashi-Lhunpo is 3,300 each, though actually over 4,000 monks live in each. (5) Sakya Monastery, founded in 1071 by Lama Marpa, (6) Derge Monastery founded in 1548 in Eastern Tibet, (7) Kum-bum Monastery founded in 1578 near the Lake Koko Nor, (8) Dekung Monastery situated 100 miles north-east of Lhasa, (9) Samye Vihara founded in 823-35, south-east of Lhasa, on the left bank of the Brahmaputra, and (10) Nethang founded in 1213, south-west of Shigartse, contain over 3,000 monks each. Besides these, there are several more monasteries like Reting (founded by Domten, first disciple of Atisha, 60 miles north of Lhasa) with more than 1,000 monks in each.

Elementary education is generally imparted to monks in almost all the monasteries of Tibet. One has to go for higher education to some of these big Universities near Lhasa as there are no big educational centres in Western Tibet (*Ngari*). Besides religious education grammar, literature, medicine, image-making, engraving, painting, etc., are also taught. The Nalanda-school of casting bronze images and other bronze casts has been, till today, faithfully preserved in Tibet. Derge, Lhasa, and Tashi-Lhunpo are the biggest centres of bronzes though one can get bronze images and bronze models of Buddhistic gods and goddesses, monks, *stupas*, etc., in almost every monastery in Tibet, Nepal, Sikkim, Bhutan, and Rampur Bushahr State. All these Universities and monasteries are residential and are maintained by big landed properties attached to them, by public charity and also by the trade and banking business conducted by some of the business-minded monks in them. Out of the

total strength of the Universities only half the number are regular students and the rest of the monks are servants, conductors, managers, tradesmen, etc. Students from different places like Rampur Bushahr State, Ladakh, Bhutan, Sikkim, Southern Russia and Siberia, and China go to these monastic Universities for study. Almost all of them are monks. There are two Colleges near Lhasa, one for Medicine and the other for Astrology.

Monks are of two orders : *lamas* or superior order of monks and *dabas* or ordinary monks. It is after studying for several years both religious and ritual texts that one is made a lama. There are different orders, high, middle, and low amongst lamas also. All monks including lamas indulge in drinking and meat-eating. Tibetans, in general, have no religious bigotry though they are very superstitious and their monasteries can be vested by people of any sect or religion. All the monasteries in Western Tibet were built after the ninth century.

Damarus, conches, drums, cymbals, bells, clarionets, flutes, pipes of human bones, and some other musical instruments, *dorjes* (thunderbolts), human skulls, several cups of water and barley, incense, butter-lamps, *chhang*, *tsampa*, meat, butter, cakes, and many other things are used in the worship of deities in the monasteries. Now and then big *yantras* or *mandalas*¹ are drawn and images of *tsampa* and butter in several colours are made of different tutelary deities (*yidam*) and elaborate *pujas* are conducted from 3 to 30 days mostly according to *tantrik* rites. On the

¹ A *mandala* or *yantra* is a mystic circle, geometrically divided into circles, squares, and chords, in which are painted some symbols, deities, and *Bijaksharas* (letters).



33. Gyaniima Mandi

[See p. 119



34 Khyunglung Gumpa and Cave-dwellings situated in the erosion Terraces and Spires of Volcanic Lava

[See p. 104



35. The Deserted Cave-Colony of Pangtha [See p. 78]



36. Guria Mandhata Peaks [See pp. 8, 11, 281]

last day of the worship a big *havan* (fire-oblation) is performed. Several water-colour paintings called *thankas* or banner-paintings are hung in the image and library halls and other rooms. The paintings represent deities, lamas, scenes, *yantras*, etc., and have silk borders and veils over them to protect them from being damaged. Tibet owes a great deal to India for the development of her culture—religion, civilization, learning, painting, and other arts and crafts. Tibetans possess a good sense of artistic taste; there is no house which does not possess at least one painting, an artistic folding table, and a few silver-plated cups.

Library

The two great Tibetan works in the shelves of a Tibetan library are *Kanjur* (or *Kan-gyur*—translations of Lord Buddha's actual utterances) in 108 volumes and *Tanjur* (or *Tan-gyur*—translation of *shastras*) in about 235 volumes. The latter work comprises of different schools of Philosophy, *Kavyas*, Grammar, Astrology, Astronomy, *Devata-Sadhana*, *Tantras*¹ and *Mantras*, besides the commentaries on several books of *Kanjur* and Tibetan translations of the Chinese renderings of the original Sanskrit works. *Tanjur* also contains the translations of several other Sanskrit works whose originals have been for ever lost in the bonfires of the various ruthless Mahommedan invaders and kings. It also contains the lost works of the great astronomer Aryadeva, Dingnaga, Dharmarakshita, Chandrakirti, Shantarakshita, and the lost works of Kamalashila; *Vadanyaya tika* of the great Grammarian

¹ *Tantra* is the worship of *Shakti* or female energy. The female energy is worshipped in conjunction with male energy. The union of female and male energy or negative and positive energy is the essence of *Tantra*.

Chandragaumi, *Chandra Vyakarana*, *Sutra*, *Dhatu*, *Unadi-path*, *Vritti*, *Tika*, *Panchaka*, etc; *Lokananda Nataka*, several lost works of Ashvaghosha, Matichitra, Haribhadra, Aryasura, and others; Kalidasa's *Meghaduta*; and some works of Dandi, Harshavardhana, Kshemendra, and other great poets. The medical works of *Ashtanga-hridaya* of Nagarjuna, of Shilihotra, and others with commentaries and glossaries; and the translations of some Hindi books; and also of some of the letters of Matichitra to the Emperor Kanishka, of Yogishavara Jagadratna to Maharaja Chandragupta, and the letters of Dipankar Shreejnana to Raja Nayapala (of Pala Dynasty) are in the volumes of *Tanjur*. Besides these two voluminous collections of works the lives of Nagarjuna, Aryadeva, Asanga, Vasubandhu, Shantarakshita, Chandrakirti, Dharma-kirti, Chandragaumi, Kamalashila, Shila, Dipankar Shreejnana, and other Indian Buddhist Pandits are also written in Tibetan language.¹

People speak Tibetan which varies from district to district. When Buddhism was introduced into Tibet during the time of King Srongchen in about the year A.D. 641, at his order, his minister Thonmi invented, for the then spoken language, a character on the model of the then Kashmiri Sharada alphabets, in order to translate Pali and Sanskrit, Buddhist and other works into Tibetan. There are five vowels and thirty consonants in Tibetan language. Thonmi wrote the first grammar of the Tibetan language; nearly half the number of letters written are silent, that is, not pronounced; and necessary modifications have been made so

¹ I am grateful to my friend Mahapandit Rahula Sankrityayana for most of the information given in this paragraph.

as to include the sounds peculiar to Tibetan and Sanskrit languages. Before the time of Thomi writing was unknown in Tibet.

In the beginning of the fourteenth century Rinchhen Dub collected all the translations of Buddha's works under the title *Kanjur* and all the *Shastras* under the title *Tanjur*. It was in the year 1728 (?) that the *Kanjur* and *Tanjur* were printed for the first time during the regime of the seventh Dalai Lama, from Nyathang Gompa which was founded in 1213. Later, a second edition of the same works, with an additional volume in *Kanjur*, was published from Derge Gompa. But according to another version it was in the middle of the seventeenth century, the period of the fifth Dalai Lama, that these works were printed. Whole pages of books are engraved on wooden blocks and printed. But the blocks of Derge edition are of bronze, as such the print of this edition is clearer than that of Nyathang since the wooden blocks are subject to greater wear and tear. I was informed by a Tibetan friend of mine that blocks for a new edition of *Kanjur* had been prepared at Lhasa by the thirteenth Dalai Lama. Books are printed on country-made paper of three qualities, common, superior, and superfine. Books produced in the superfine or de luxe edition have thick strong paper and the letters are printed in gold. If the two works of *Kanjur* and *Tanjur* were to be retranslated into Sanskrit, they would come to about 20 lakhs of *Shlokas*.

Calendar

About the year 1027 Pandit Somnath of Kashmir translated the '*Kala Chakra Jyotisha*' into Tibetan

and introduced the *Brihaspati* cycle of sixty years called *Prabhava*, etc. (*Rabyung* in Tibetan). This cycle of sixty years is divided into five sub-cycles of twelve years each. In the seventh year (*Ta-lo* or Horse-year) of each of these sub-cycles, that is, once in twelve years, a big fair is held near Kailas at Sher-shung. The *Kumbha Mela* of India; which occurs once in 12 years has nothing to do with this fair, as several people confound. According to Tibetan scriptures, a round made to the Holy Kailas and Manasarovar during the *Ta-lo* is considered as virtuous as thirteen rounds made during other years. *Margashirsha Shukla Pratipad* (December 14, in 1936), is observed as New Year's Day on the southern shores of Manasarovar, as in the days of *Mahabharata*, and this may be of interest to the Indian astronomer. Tibetans of that region say that the sun begins his northward journey from that day. *Paushya Shukla Pratipad* (January 13, in 1937), is observed as New Year's Day on the eastern side of the Manas (Hor) and *Magha Shukla Pratipad* (February 12, in 1937) is the official New Year's Day throughout Tibet. Special *pujas* and services are conducted in the monasteries on the New Year's Day and feasting and merry-making take place for 10 to 15 days, in which monks and householders, both men and women, freely partake.

The third day of the bright half of a lunar month, dedicated to Padmasambhava or Guru Rinpoche, the eighth day dedicated to *Devi*, the full moon day dedicated to Lord Buddha, and the new moon day dedicated to *Men-lha* (medicine-god) are the days in each lunar month, on which special *pujas* are performed in the monasteries, besides some other days which differ from place to place. Tibetans know very little of

arithmetic excepting counting, so much so, for higher counting and accounting, even high officials use only the beads of a rosary which every one invariably carries with him or her, or use small pebbles, splinters of wood, seeds of apricot and date, and broken pieces of porcelain.

Mani-Mantra

Om mani padme hum is the most popular and most sacred *mantra*¹ of the Tibetans, which is ever on the lips of men, women, children, monks, householders, and all. They always repeat this *mantra* while sitting, walking or travelling. Even the ordinary Tibetan repeats this *mantra* for a greater number of times than a most orthodox Brahmin does his *Gayatri Japa* in India. It is said that this *mantra* has been invented by Avalokiteshvara by the grace of his divine father, the effulgent Amitabha Buddha; and as such it is an invocation of the Bodhisattva Avalokiteshvara himself. *Mani* symbolizes *Purusha* or the spiritual element, and *Padma* (lotus) symbolizes *Shakti* or the material. *Om* is the usual prefix of every *mantra* and '*hum*' is the *tantrik* suffix; so the *mantra* means 'Oh! Jewel (of Creation) is in the Lotus!' The letter *hri* is very often added to it; *hri* being the abbreviation of *hridaya* or heart, it implies that this *mantra* is to be meditated upon in the Heart-Lotus. As in *Tantrik* schools, Tibetans assign certain colours

¹ A *mantra* is a mystic formula consisting of letters with some symbolic importance attached to them and is an invocation of some deity. The repetition of it, in accordance with certain directions attached to it by the teacher, is considered to set up a vibration which gives out a tremendous energy that can be utilised either for physical welfare or for the spiritual benefit of a person.

to each letter of the *mantra* and they believe that the utterance of this six-syllabled formula extinguishes rebirth in the six worlds of gods, men, titans, animals, hells, and infernal hells and secures *Nirvana*. The colours of the letters are white, blue, yellow, green, red, and black respectively. *Hri* is also said to be white.

The *mani-mantra* is inscribed, embossed, or painted on walls, rocks, stones, slabs, caves, monasteries, on horns, bones, flags, and on anything. The *mantra* is engraved on round stones or slabs which are kept on walls at the entrance of villages, on the tops of passes, at camping grounds, on the way to holy places and monasteries, at spots wherefrom some holy place is seen, and at any important place. The *mantra* is written several times on slips of paper which are kept in a small brass, copper or silver cylinder with a handle. The prayer wheel, cylinder, or mill (*korlo*) is turned round and round in the clockwise direction by monks, beggars, men, women, and all. One round of the wheel is believed to be productive of as much virtue as the repetition of the *mantra* as many times as it is written on the slips in the cylinder. Several such *mani*-cylinders of different sizes are set up at the gates and inside the monasteries, and are turned round by pilgrims when they visit them. I saw some such big *mani*-cylinders in Ladakh, driven by water-power, like *pan-chakkis* (water-mills). They contain slips of paper, on which the *mani-mantra* is written a lakh, a million, or even ten million times.

Simbiling Gompa

Just above the Taklakot Mandi, situated on the top of a hill, overlooking the mandi and the neigh-

bouring villages and the Karnali with its feeders, is the famous Lamasery Simbiling, the biggest monastery of this Region. It has about six branch monasteries at Siddi-khar, on Manasarovar, and at other places. Including the branches, it has about 170 monks, of whom 6 are lamas and the rest *dabas*. There is a regular school for the junior monks of the monastery. In the main image-hall of the monastery there is a big gilded image of the Buddha about 6 feet high, seated on a high pedestal, with butter-lamps kept burning in the front. Just before entering the image-hall is the general congregational hall, festooned with scroll-paintings; and the walls are decorated with fine mural paintings. Once in a year there are held general feasts, merry-making, and mystic or symbolic dances by the monks, lasting for a week or two. In the symbolic dance they wear long gowns and a variety of masks of different deities and animals. Street dramatists with a few masks enact some dramas like Treme-Kunden (*Vishvantara Jataka*), Chogel-Norsang, Nyasa-Pomo, etc. both in the monastery compound and villages. The mystic dance of Simbiling Monastery is called *Torgyak* and takes place on the 28th and 29th of the eleventh month of the Tibetan calendar, that of Khochar Gompa, *Namdong* and takes place on the 15th day of the first month, and of Siddi-khar Monastery, *Tsege* and takes place on the 22nd and 23rd of the first month. I had the chance of witnessing, in 1944, these mystic plays and as well a purely *tantrik* rite called *Chakhar* (iron fort) held every fourth year in Simbiling, in which the blood of a black goat put in a human skull is offered as fire-oblation (*ahuti*); this rite is conducted for about 20 days. When any distinguished person visits a

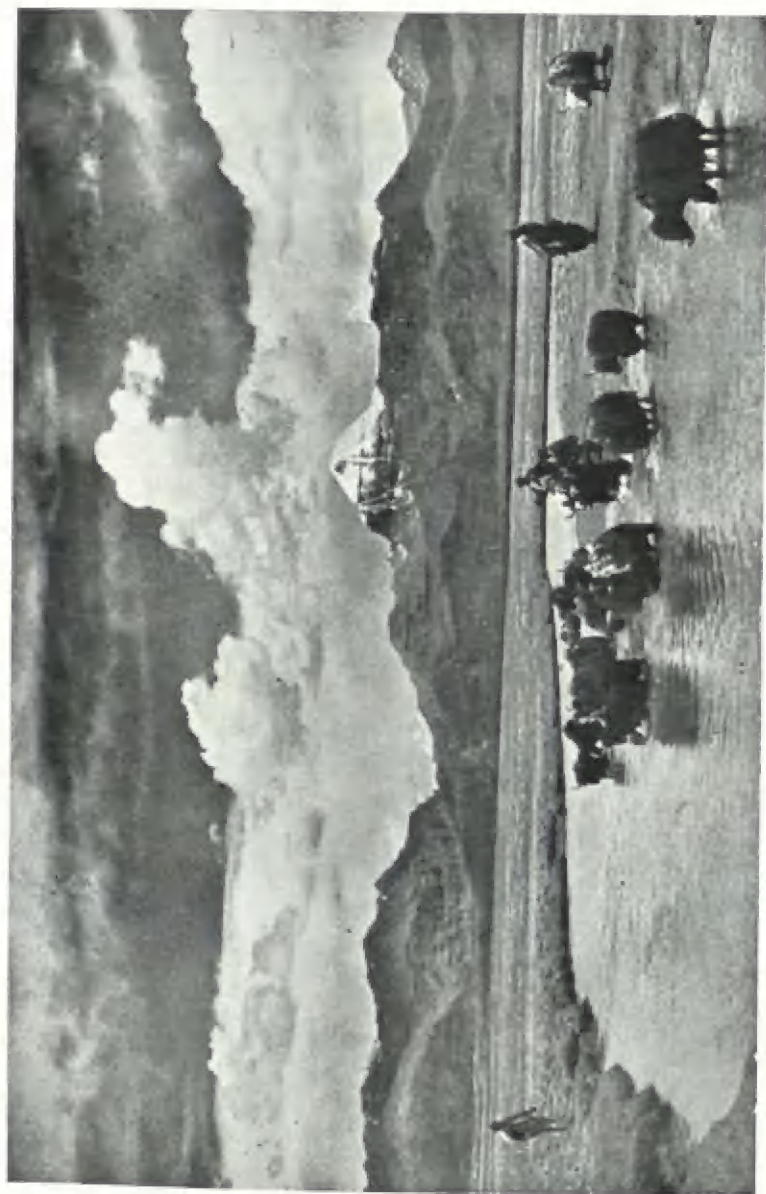
monastery, the monks receive him with the accompaniment of the musical instruments of the gompa.

There are some hundreds of Tibetan books in the shelves of the library rooms of the monastery, including two sets of the voluminous works of *Kanjur* and *Tanjur*. There is a separate image-hall of the *Menlha* (god of medicine) adjacent to the library halls. There are more than 400 excellent *thankas* or banner-paintings and four huge silk banners of Buddha and Maitreya each measuring 60 by 30 feet. These are all kept under lock and key by the *Dazang* and are taken out for decorating the monastery on special occasions as on the new Year's Day.

Simbiling Gompa is affiliated to the Depung Monastery of Lhasa and as such the *Labrang* or the general managing body including the *Khenpo* or the abbot comes from that monastery appointed for a period of three years. This monastery has three more local managing bodies, all elected from amongst the monks of the gompa, the first two being for a period of three years. The first is the *Dazang* or the general managing body which is in charge of the whole property of the gompa ; the second is the *Nyarchang* or the kitchen managing body including the *Majin* or the head cook ; and the third is the *Chongpon* or the trading body which is elected annually. The *Geku*, a monk with magisterial powers, who looks to the discipline of the monks, and the *Unje* or the *Pujari* are also elected annually. Adjacent to this gompa, situated on the west, is a branch of the Sakya Monastery.

Khochar Gompa

Situated on the left bank of the river Karnali is the famous Khochar or Khocharnath Gompa, at a



37. View of the Holy Kaiias from Zhong Chhu—Photo by Courtesy of Mr. Salim Ali, Bombay [See p. 17]



38. The Holy Mount Kailas (Southern View), Gombo-phang (Ravan Parvat) on the left and Kyangs in the foreground
Photo by Courtesy of Mr. Salim Ali, Bombay [See p. 17]

distance of about 12 miles south-east of Taklakot Mandi. It is also called *Khechari Tirtha* by some Hindus. Pilgrims visit this place all the year round. Deepankar Shreejnana had spent a rainy season in the year 1034.

Khochar is one of the most interesting monasteries in Western Tibet. There is an interesting story in the *Khochar Karchhak* regarding Khochar. Seven *Acharyas* from India once took seven loads of silver to Kardung and deposited it with Jambyang Thakpa, the then King of the place and went away saying that they would return in seven years. But they did not turn up even after nine years. So the King gave the silver to two silversmiths—one a Nepali by name Ashadharma and the other a Mohammedan by name Vankulla and ordered them to make a divine idol out of it. Accordingly the smiths melted the whole silver to mould it into an idol but suddenly there sprang up a big image of Jambyang out of it on its own accord (*Syayambhu*) out of the molten silver.

A lama and his disciple were staying on the sandy banks of the Karnali where the present Khochar Gompa stands. Every night the disciple used to see a light on the sand, when he would go to fetch water, though he would see nothing in the day-time there. One day the lama asked his disciple to pile up a heap of stones at the place where he saw the light, and the disciple did accordingly. To his great surprise, the heap of stones became a big boulder by next morning. The lama said that that light was the spirit of Jambyang.

Having heard of the *Syayambhu* (self-formed) idol of Jambyang, the King of Kardung ordered that the idol should be brought to Kardung to be installed in a temple. Accordingly the image was put in a two-

horsed carriage and was being taken towards Kardung. When the carriage reached the big boulder above described, the spirit of Jambyang entered the idol and it was stuck up on the boulder and said ' *Khor-chhak*—I have come here and stay here only.' This is the first utterance of the idol.

Then a gumpa was constructed for the image by the King. When the King was thinking of getting a pedestal made for the idol, it spoke out a second time, 'Let nobody—man, beast, bird, or insect—enter the gumpa for seven days.' Accordingly the gates of the monastery were closed but on the fifth day, the *Konger* (keeper of idols or the assistant *Pujari*) in his anxiety to see if the lamps inside were burning or not, opened the doors. He saw the divine smiths that were working out the pedestal or *Simhasana*, had entered the image and the pedestal was left incomplete. Later on, Vishvakarma, the divine architect, made the silver idols of Chhagnadorje and Chenresig.

The idol spoke for a third time, 'If the Map chhu rises, it comes near the monastery and I will be taken away by the waters ; so keep the image of Jechun Doma (*Tara*) facing the river. If anybody makes an embankment his sins of 500 lives shall be washed away ; if any one feeds the workmen, the sins of 10 lives shall be washed away ; and if one puts even a small stone as big as a thumb on the embankment with a pure heart the sins of one life will be washed away.'

Once some soldiers entered the gumpa and stabbed on the thigh of the idol wherefrom milk came out. The idol spoke a fourth time, 'Oh, great sinner!' Whereupon all the soldiers went out of the temple, but

the one who had actually stabbed the idol died at the temple gate by vomiting blood.

The King of the southern region had two queens but no sons. They did all sorts of *pujas* but in vain. The image spoke for the fifth time, 'Come here, Queens, do three prostration-salutes to me, you will have three sons.' The queens did so and later they had three sons.

One great lama by name Chang-nyun came here, when, the image spoke out for the sixth time, 'Remove the paper-bird from my back which has been placed by some *ngakpa* (black magician).' A *ngakpa* usually draws the picture of a bird and some other formula on a paper and performs some incantations and rites and puts it in the wall of a house. After a period of 7, 9, or 21 years depending upon the strength of incantations, the bird comes to life and flies away and the person or idol concerned breaks to pieces. Such an incantation paper was kept behind the idol of Jambyang. The lama, Chang-nyun, took out the paper-bird which was just fluttering and threw it in fire with tongs. When Kyangun-Zingba-Nurba, the lama who has constructed the existing Gossul Gompa, went to Khochar, the idol of Jambyang spoke for the seventh time, 'The flower in my hand has been taken away by a soldier. It will be good if you can replace it.' The gold-silver flower studded with a cat's-eye (*Vaidurya*) in the middle, was replaced by the lama. The gold lamp in front of the image was presented to the gompa by the same lama. It is believed by the Tibetans that the image of Jambyang would speak out six times more, after which the world would see the day of resurrection.

In the *duvang* or the image-hall there are three beautiful images of three of the most important

Bodhisattvas, made of silver, standing on an artistically designed pedestal or a bracket about 5 feet high. The images are placed on big lotuses. The *Simhasana* including the lotuses are made of *Ashta-dhatus* or eight metals. The middle image *Jammyang* (Manjughosha) is about 8 feet high and its face is yellow. On its right is the idol of *Chenresig* (Avalokiteshvara) 7 feet high and its face is white ; and on the left is the idol of *Chhagnadorje* (Vajrapani) 7 feet high and its face is of blue complexion. These three images are erroneously described as and believed by many credulous people to be those of Rama, Lakshmana, and Seeta. It is interesting to note that all the three images are of male deities! On either side of these images are twelve images, each about five feet in height, kept in almirahs, six on either side. Of these, eight are the images of Neve-se-gye, three are the replicas of Khochar images, and one of Khasarpani.

The images and the pedestal are of South Indian pattern and were prepared by the Nepalese sculptors. In 1899 a big fire broke out in Khocharnath Gumpa and destroyed the two side-images—Avalokiteshvara and Vajrapani. Later they were repaired by the Tibetan and Nepalese sculptors. Another tradition says that all the three images, along with the pedestal, were brought to this monastery from *Lanka* or Ceylon.

There are several cups of water and butter-lamps made of gold and silver and are artistically arranged in front of the images. There are two big and fierce-looking images each about 8 feet high at the entrance gate of the monastery. The image that is on the left hand side is that of *Tamdin*, the fierce form of Avalokiteshvara, and that on the right is of *Chhagdor*, the fierce form of Amitabha Buddha. Just after enter-

ing the *duvang* there are four images of the guardian deities of the four quarters six feet high, two on each side. On either side of the image hall are the shelves containing the volumes of *Kanjur* kept in perfect order. There are 30 *dabās* and a *Tulku-lama* in this monastery. By the side of the main gomba there is a *mani-khang*, a house in which is installed a huge *mani-cylinder*.

There is a big hall in the second building of the monastery where mystic dances called *Namdong* and annual feasts are held. In the hall is hung a stuffed wild yak and an Indian tiger on one side. There are also the images of *Chamba* (Maitreya, the coming Buddha), Mahakala and Mahakali, *Sange-Pavo-Rapdun*, and *Yum-Chhamo-Chhok-Chu-Sange*, placed in different rooms. There is a big *mani-cylinder* 10 feet high and 5 feet in diameter.

The sitting image of Maitreya is about 22 feet in height. Due to its gigantic appearance, Indian pilgrims wrongly identify it with that of Bhimasen of *Mahabharata* fame. *Sange-Pavo-Rapdun* (Buddha-hero-seven) are the images of the seven Buddhas sitting in different *mudras* (postures)—Gautama Buddha, Maitreya Buddha, Kashyapa Buddha, Amitabha Buddha, and others. Ignorant Hindu pilgrims think them to be those of *Sapta Rishis*—Agastya and others. *Yum-Chhamo-Chhok-Chu-Sange* (Mother-great-directions-ten-sages) are eleven images sitting in different postures. The middle one is that of the great Mother Devi Prajnaparamita and the five images on either side are those of ten quarters (four quarters, four corners, sky, and netherland) but not of the eleven *Rudras* as is erroneously believed by Hindu pilgrims. There are fine frescos in this image-hall, some of which are getting damaged

due to rain-water leaking inside. The room is very dark and so very few visitors are aware of these valuable paintings. A great service would be done to the cause of art if any visitor could take a series of these paintings under flash-light. In the upper storey of the building there is the image-hall of *Jechun Doma* (White Tara) in which there are the volumes of *Kanjur*. The 21 *Avatars* of *Devi* are depicted on the walls of the hall. Adjacent to this hall is the *Tanjur Library Hall*.

On the back side of the gompa, situated in the midst of *mani*-walls on the bank of the Karnali, is the *gaddi* of the great Lochava (translator) Rinchhen-Zangbo, where he delivered sermons for twelve years. There are several houses and *donkhangs* (Tibetan *dharmashalas*) very near the gompa; and the village itself is a little away from it. Khochar is warmer than Taklakot, though more windy. A little down the monastery there is a bridge on the Karnali, crossing which Nepal territory begins. About 5 miles from Khochar is Shar, the last village in the Purang valley, where *pema* trees (a sort of stunted deodars) grow.

GURU-GEM

Nearly 5½ miles down Tirthapuri, situated at the confluence of the river Sutlej and Chornak (or Sumnak) is the site of the ruined village of Palkya, destroyed by Zoravar Singh in 1841. The foundations of the monastery and some Ladakhi type of *chhortens*, and a water-mill still stand there to remind one of the past glory of the place. There are some ruined columns of buildings on the surrounding mountains, said to be the old royal mansions of Kardung.

One Khampa lama of Pembo sect came here in 1930 and began to live under the projection of a rock (*kem*). He became famous very soon and had built a well-planned monastery in the vast plain at the foot of his mountain-abode. So this place came to be known as Guru-kem or Guru-gem. The monastery was almost ready in 1934 though finishing touches were given later. The lama spent thousands of rupees over this gumpa and made it the 'cynosure of the neighbouring eyes'. The monastery itself is called Donga-thagyaling. The monastery proper is about 110 feet square and is two-storeyed with an open space of 140 feet square in front of the gumpa bounded by several rooms, the whole having the appearance of a big fort. The *duvang* or the general image-hall is well decorated with beautiful frescos and banner paintings and the special image-hall behind it, is furnished with seven highly artistic stucco images of (1) Thousand handed Chenresig, (2) Jambyang, (3) Nambar-jekhar, (4) Lhasa chho (Buddha), (5) Dolma, (6) Chamba, and (7) Demchhog in *Yab-Yum* pose, each 9 feet high. There are *Kanjur* and *Tanjur* library halls on either side before entering the image-hall. Mystic plays are enacted at the end of the ninth month of the Tibetan year. There are 20 monks here including the founder-Lama.

In the mountain behind the gumpa are the abodes of the lama and senior monks; and a furlong down the place is a convent or nunnery with 30 inmates attached to this gumpa. There are a few plots in which turnip and radish are grown. Due to over-confidence of the lama in the efficiency of his *mantra-tantra*, Kazakis besieged this gumpa for two days in

1941 and completely peeled off everything costly in the monastery and carried away thousands of rupees worth of cloth belonging to Johari merchants. During the engagement two monks of the monastery and seven Kazakis died and the lama was let off completely naked.

KHYUNGLUNG

Nine and a half miles down Guru-gem, situated on the left bank of the Sutlej, is the village Khyunglung (14,000 ft.). The whole of Khyunglung was once a huge volcanic area and is an interesting subject for study from the geological point of view. There are a few houses situated in caves, in a huge mound consisting of thousands of tons of calcium deposits. There is a hot spring near the bridge where a beautiful dome of stalagmites and stalacites is formed. Crossing the bridge to the right bank, there is a vast area of volcanic lava formed into huge columns like the ruins of forts. Several caves were dug into these columns most of which are now desolate. On the top one of the mounds is the Monastery of Khyunglung and on the topmost columns is the old fort. There are 10 *dabas* in this monastery. Here are the images of Gombo and Jigje in *chen-khang*; and those of Chhuku Rimpoche, Sange, and Chenresig in *durang*. Two armours, two iron shields, and two leather shields of Zoravar Singh are preserved here.

MONASTERIES OF MANASA KHANDA

1. Simbiling Gompa of Taklakot (170 monks), branch of Depung Gompa, *Gelukpa*; 2. Khochar Gompa (30 monks), branch of Nor or Nur Gompa, *Sakyapa*; 3. Siddi-khar Gompa (5), branch of Simbi-



39. Raising of Taihochhe (Flag-staff) on Lord Buddha's Birth-day [See p. 13]



40. Western View of Kailas, with Ssturnian Rings [See p. 18]



41. Kailas Peak from the North West, Pyramidal shape

[See p. 18

ing, *Sakyapa*; 4. Gomba-kong (10), branch of Sakya Gompa, situated adjacent to Simbiling; 5. Gukung Gompa (3), branch of Gengta Gompa, *Dekungpa*; 6. Kangje Gompa (7), branch of Sang-chang-chhup-ling Gompa, *Dukpa*; 7. Kirong-trama, 8. Thiti-trama, 9. Toyo-trama, all these there belong to Simbiling and are meant only for seasonal stay and are not full-fledged gompas; 10. Gossul Gompa (3), branch of Simbiling, 11. Chiu (5), branch of Dira-phuk, 12. Cherkip (1), belongs to Tarchhen Labrang, 13. Langpona (6), branch of Hemmis Gompa of Ladakh, *Sakyapa* (?), 14. Ponri (6), branch of Sera Gompa, *Dukpa*, 15. Seralung (20), branch of Dekung, *Dekungpa*, 16. Yerngo (6), branch of Sakya Gompa, *Sakyapa*, 17. Thugolho (8), branch of Simbiling, these eight are Manas-monasteries; 18. Nyanri Gompa (5), belongs to Tarchhen Labrang, *Ngingmpa* (?), 19. Dira-phuk (6), branch of Dadingbochhe Gompa, *Kadampa*, 20. Zuthul-phuk (3), belongs to Tarchhen Labrang, 21. Gengta (6), branch of Dekung Gompa, *Dekungpa*, 22. Silung (2), under Gengta, all these five are Kailas-monasteries; 23. Chepgye, at present branch of Mangshang Gompa, but the site of the monastery belongs to Gengta Gompa; so Chepgye pays a nominal tribute to Gengta by way of rent, 24. Kardung, branch of Mangshang Gompa, 25. Mangshang Gompa, these three gompas belong to an independent group called *Jokchhin* Sect, much akin to *Ngingmpa*; there are about 50 monks and as many nuns in all these three monasteries combined; 26. Thunsa (3), branch of Simbiling Gompa, one day's march north of Thockchen; 27. Seli-phuk (15), branch of Depung, *Gelukpa*; 28. Dulchu (24),

branch of Sera Gompa ; 29. Tirthapuri (15), it was once a branch of Hemmis Gompa but since 1945 it is under Simbiling Gompa ; 30. Khyunglung (10), branch of Sera Gompa, *Dukpa* ; 31. Guru-gem (20) independent, the founder-lama originally belonged to *Bon* Sect but now he professes *Gelukpa* sect; 32. Gartok (10), probably branch of Depung Gompa; 33. One Nunnery, adjacent to Purang Zong's fort, affiliated to Gombakong (15 nuns); 34. one Nunnery at Toyo affiliated to Simbiling Gompa (15 nuns); and 35. one Nunnery at Guru-gem, attached to the monastery (30).

Besides these there are five more monasteries in the Greater Manas Khanda : 1. Dongpu (15 monks?); 2. Dapa (15) 3. Mangnang (5), branch of Depung; 4. Thuling (20), branch of Sera Gompa; and 5. Chhabrang Gompa (15), branch of Sera Gompa.

CHAPTER IV

AGRICULTURAL AND ECONOMIC GEOGRAPHY

AGRICULTURE

The whole valley consisting of about 50 villages including Taklakot is called Purang valley and is cultivated. Excepting the villages in the Purang valley the whole of Kailas-Manasarovar Region is a barren tract. Barley and pea are grown in sufficient quantities in this valley. The fields are cultivated by water from the hill-streams distributed into small nice channels. The channels are bordered by green grass and present a pleasing appearance in the bleak and barren country. Ploughing is done by *jhabbus* (cross-breed of Indian cow and Tibetan bull, the yak) or ponies since yak is not good for ploughing though useful for carrying heavy loads. It is said that agriculture was first introduced into Tibet in the beginning of the Christian era during the reign of the king Pudekur-Gyal. King Srongchen Gampo (630-98) introduced the earthen pot, the water-mill, and the handloom. There are water-mills (*pan-chakkis*) for grinding barley, in some of the villages of the valley wherever there are hill-streams or channels taken out of them. White and red mustard, turnip, and radish are also grown sparsely here and there. Since the year 1940 the cultivation of potato is being experimented at Khocharnath.

VILLAGES IN KAILAS-MANASA KHANDA

It is proposed to give here those villages which have permanent residences or houses, since it is a bit difficult now to give a complete list of all the shepherd camps or moving tent-villages. Most of the villages are situated in the Purang valley, a list of which would be given first with the approximate number of houses in each, put in brackets.

On the right bank of the river Karnali from down to up : 1. Shar¹ (7 houses), by the side of the village is Sharba chhu, before reaching Khochar two more streams of Chhulung chhu and Salungba chhu fall on the way, 2. Khochar (100), these two villages are under the jurisdiction of Tarchhen Labrang; about $\frac{3}{4}$ mile from the village is Lalungba chhu; 3. Lilo (gompa and 4), 4. Kangje (6), these two villages go by the common name of Kangje and are under the jurisdiction of Toyo Magpon; nearby flows the Kangje chhu; 5. Gejin (7), 6. Toja (5), these two villages are under the jurisdiction of Parkha Tasam; Gejin chhu flows nearby; 7. Thayap (7); 8. Suje (10), 9. Chhulung (10), here is the house of Kirong Magpon, 10. Ma-phuk (6), 11. Kungarto (6), 12. Dangechhen (20), these six villages are under the jurisdiction of Kirong Magpon; nearby is Kungarlungba or Dangechhen chhu, on the right bank of which is the place called Chhegang, where a mandi of the Nepalese is held in summer; 13. Chhorten Chhemo (6), 14. Khele (2), 15. Topa (5), here is the

¹ A little up the village Shar, situated on the right bank of the river Karnali is the village Ki, with 3 houses and some cultivation on either side of Ki chhu. Both the Tibetans and the Nepalese claim this village to be theirs.

house of Toyo Magpon and Zoravar Singh's *samadhi*, 16. Lagun (4), 17. Shulung (5), Garu chhu flows nearby, 18. Garu (3), 19. Theji-gomba (3), 20. Delaling (4), 21. Lee or Toyo-ling (7), these nine villages go by the common name of Toyo and are under the jurisdiction of Toyo Magpon; 22. Ronam (3), beyond this village is Ringung chhu, 23. Ringung (4), beyond this is Phurbu chhu, 24. Phurbu or Burfu (1), 25. Dungmar (11), these four villages go by the name of Ringung and are under the jurisdiction of Purang Zong and Tarchhen Labrang both; beyond there is Baldak chhu; 26. Kardung (7), this is under the jurisdiction of Parkha Tasam.

On the right bank of the Karnali from up to down: 27. Harkong (1), it is under the jurisdiction of the Simbiling *Nyarchang*; 28. Doh (9), this is under the jurisdiction of Tarchhen Labrang; 29. Salung (4), this is under the Gengta Gompa; then comes the Yangse chhu; 30. Gukung or Kumphur (30), this is under Kirong Magpon; all the houses are in caves; there is also a gompa here which is a branch of Gengta Gompa and a Government Rest House; 31. Takla-khar or Taklakot (3), Simbiling Gompa, Sakya Gompa, and the fort of the *Zongpon*, at the foot of which there is the mandi of the Bhotia merchants; 32. Pili-phuk (30), here also the houses are in caves and are under the jurisdiction of Thiti and Toyo Magpons; 33. Chhungur (10), 34. Yidig (2), these two villages are situated between Yidig and Tagla chhu, 35. Dulum (3), 36. Tashigong (2), 37. Chhilechung (3), 38. Magrum or Thiti (30), here is the house of the Thiti Magpon, 39. Nayi (7), 40. Gunam (4), 41. Relashar (3), 42. Chhumi-thang (6),

these ten villages go by the general name of Thiti; of these Tashigong belongs to Tashigong Gompa that is beyond Gartok; and the remaining nine villages are under the jurisdiction of Kirong Magpon. The three *pattis* of Toyo, Kirong, and Thiti are jointly called Chho-sum, and there is a joint *Panchayat* of the same name, 43. Phulak (3), 44. Chhokro (3), here is Chhokro chhu, 45. Togang (4), 46. Shiddi-khar (3), above the village is the gompa and the old fort, 47. Dorjegang or Mayul (1), beyond this is Lok chhu, 48. Lok or Lo (20), 49. Lukpu (4), all these eight villages are under the jurisdiction of Simbiling Gompa.

To these may be added: 50. Thugolho (8 houses), on the southern shores of the Manas, under the jurisdiction of Simbiling Gompa; 51. Tarchhen (4), belonging to Bhutan State; 52. Debring (1), belonging to Shungba Goba, under the jurisdiction of Barkha Tasam; 53. Khyunglung (5), 54. Missar (3), these two are under the jurisdiction of Dapa Zong; and 55. Gartok (9), capital of Western Tibet, directly under the Viceroys.

The following are some of the important settled but moving shepherd camps or tent-villages, on the southern side of the Kailas Range: 1. Nonokur (25 tents) in Nimapendi valley, 2. Harkong (20?), 3. Chhomokur (25?), 4. Hor-Toma (25?), near Thokchen, 5. Kongyu tso (30?), 6. Hor-Toshar (30), 7. Toshar (30), east of Tamlung tso, 8. Hor-Pangriya (30?), near about Ponri Gompa, 9. Kangjak (30?), near about Kuglung, 10. Shungba (25?), of Rakshas Tal, 11. Korpon (20?), of Tarchhen, 12. Hor-Gyeva (20?), 13. Chhujuthol (20?), near Chhakra, 14. Khyunglung (25?), near Gombachen, and 15. Missar

(30?). The following are on the northern side of Kailas : 16. Diji (25), 17. Shungba-Majin (30?), 18. Songkora (25), 19. Seli-phuk (25?), 20. Rundara (25), 21. Gerke (25), 22. Bongba (30), and 23. Yagra (25?).

Every monastery can be counted as a village inasmuch as it has got a *pucca* building and some houses attached to it. To this list may be supplemented 1. Dongpu, 2. Geng-yul, 3. Dapa, 4. Mangnang, 5. Thuling, and 6. Chhabrang, which are situated in the Greater Manasa Khanda.

FAUNA

Wild yak (*dong*), wild horse or ass (*kyang*), snow-leopard (*chen*) (this kills even horses), leopard (*jik*), lynx (*yi*) (this kills sheep and goat and drinks only blood, its skin varies in colour from pale brown or yellow to silvery white), brown bear (*te*), black bear (*tom*), man-bear (*me-te*) (walks on hind legs like man), the great Tibetan sheep (*nyan*) (*Ovis Ammon* or *Hodgsoni*), *tharal* or blue sheep (*na*) (*Ovis Nahaura*), *ghural* or Tibetan gazelle (*goa*) (*Gazelle picticaudata*) (white near the anus, utters '*mya*' like goat), Tibetan antelope (*cho*) (*Panthilops Antelope* or *Hodgsoni*) (long horns with rings), *barahsingi* (*shya*), deer (*gya-ra*), wolf (*changu*), fox (*haje*), hare (*regong*), marmot (*phiya*), rat (*sivi*), tailless rat (*abra*), and lizard are the wild fauna of Manasa Khanda. Lion (*Senge*) is said to be seen near Kailas only by the sages ; so it is only a mythological creation. Musk-deer (*la*) is very rarely found in Manasa Region near Nepal borders, but it is abundantly found in other parts of Tibet. As a matter of fact musk is one of the chief commodities which Tibet exports to China and

India. Fish is found in abundance in Manasarovar and Rakshas Tal and some rivers, but Tibetans do not eat fish and birds. Serpent and scorpion are not seen here. The marmots remain in hibernation in their holes under several feet of snow for 3 to 4 months in winter. It is perhaps by observing these marmots and frogs that *yogis* evolved *Khechari Mudra*, in which they remain for days together in *Samadhi* (trance) without any signs of external growth or decay. The fat and skin of these marmots are considered very effective for rheumatism, which is very common in these cold regions.

Musk-deer¹ (*Moschus moschiferus*) is chiefly an inhabitant of the Himalayas, Tibet, and Central Asia. It lives at heights ranging between 8,000 and 12,000 feet. It is about two feet high and three feet long. Musk deer is the only hornless species. Its ears are long, has two upper canine teeth three inches long, hoofs narrow and pointed, lateral hoofs greatly developed so as to rest on the ground, tail rudimentary, colour brownish-grey, varying in shades, and hairs thick, brittle, pith-like, and yet soft and springy to the touch. The so-called *Kasturi-ka-nabha* is a gland or pouch of the size of a lemon, situated at the root of the penis, a little behind the umbilical knot and is found only in males. As is generally believed musk-pod, musk-pouch, or *Kasturi-ka-nabha*, is in fact not *nabha* (umbilical knot) or its secretion. The quantity of musk contained in a musk-pod varies from $\frac{1}{2}$ to $2\frac{1}{2}$ tolas. Musk is dark-purplish or brownish in colour

¹ I have been conducting interesting researches regarding 'Musk and Musk deer' for the last twelve years and I expect to conclude my work by the end of next year, when I hope to publish a full report on the subject.



42 The Holy Kailas between the two Sentineis—Chhagnadorje and Chenresig [See pp. 17, 269



43. The Holy Kailas between Chenresig and Jambyang (N.E.) [See p. 17]



44. Khando-Sanglam Glacier [See pp. 164, 299]

and unctuous to touch. It has a remarkable permanence and stability of odour. Its scent is most penetrating and persistent and hence its importance for perfuming purposes. Very often musk is highly adulterated by the sellers, taking advantage of this characteristic feature. The price of musk per tola ranges anything from Rs. 35, which a *Shikari* charges, to as much as Rs. 90, which a consumer has to pay in plains.

Swan or bar-headed goose, brahminy duck, gull, fishing eagle, stork or heron, vulture (*thankar*), hawk (*lak*), kite (*charget*), *koser*, *konak*, *singja*, two varieties of owl (*ukpa*), raven (*karok*), red-billed and yellow-legged chough (*kyunka*), yellow-billed and yellow-legged chough, pigeon (*mugrin*), *chakor* (*takpa*), woodpecker (*phuphu-seli*) lark, house-sparrow (*khang-chil*), rock-sparrow (*ri-chil*), *sari-tak-tak* (red), *pongpo-gyakar* (white and black), *kangaling* (found near Chema-yungdung), *tha* (ash colour, eats sparrows), *phunga* (hunts pigeons), *chhupja*, and butterfly are the avifauna. Besides these, several other migratory birds visit this Region in particular seasons. On the shores of the Manasarovar and Rakshas Tal swarms of harmless and non-malarial variety of black mosquitoes are seen. When these mosquitoes are killed, a sort of deep green substance comes out instead of blood. It does not sting, so it may interest a research student of the Tropical School of Medicine. Like the mythological animal lion, there is a mythological bird, red crow, which, if held in the hand, makes the person holding it invisible.

AVIFAUNA OF KAILAS-MANASA KHANDA¹

1. Tibetan Raven (*Corvus corax tibetanus* Hodgs),
2. Yellow-billed Chough (*Pyrrhocorax graterulus*), 3.
- Red-billed Chough (*Pyrrhocorax pyrrhocorax*), 4.
- Hume's Ground Chough (*Pseudopodoces humilis* Hume), 5. Rock Nuthatch (*Sitta neumayer*), 6. Wall
- Creepers (*Tichodroma muraria*), 7. Brown Dipper
- (*Cinclus pallasii*), 8. White-breasted Dipper (*Cinclus cinclus*), 9. Collared Bush Chat (*Saxicola torquata*),
10. Tibetan Desert Chat (*Enanthe deserti*), 11. Eastern
- Indian Redstart (*Phoenicurus ochruros*), 12. Ruby-
- throat (*Calliope pectoralis*), 13. Blue Rock Thrush
- (*Monticola solitaria*), 14. Robin Hedge Sparrow
- (*Prunella rubeculoides*), 15. Garhwal Hedge-Sparrow
- (*Laiscopus collaris whymperi*), 16. Tickell's Willow
- Warbler (*Phylloscopus affinis*), 17. Rosy Pastor (*Pastor roseus*), 18. Great Rose-Finch (*Carpodacus rubicilla*),
19. Red-breasted Rose-Finch (*Pyrrhospiza punicea*),
20. Pink-browed Rose-Finch (*Propasser rhodochrous*),
21. Goldfinch (*Carduelis caniceps*), 22. Twite (*Acanthis flavirostris*), 23. Gold-fronted Finch (*Metaponia pusilla*), 24. House-Sparrow (*Passer domesticus*), 25. Tree Sparrow (*Passer montanus*), 26. Tibetan Mountain Finch (*Fringillauda brandti haematopyga*), 27. Tibet Snow-Finch (*Montifringilla nivalis adamsi*), 28. Red-necked Snow-Finch (*Montifringilla ruficollis*), 29.

¹ I am grateful to Mr. Salim Ali, the well-known Indian Ornithologist of Bombay, for having kindly allowed me to reproduce the list of birds of this Region, which he had observed between June 8 and July 8, 1945 when he was on an ornithological pilgrimage to this Region. Those who are interested in the subject may refer to the 'Journal of the Bombay Natural History Society', Vol. 46, No. 2, August 1946.

Blanford's Snow-Finch (*Montifringilla blanfordi*), 30. House Martin (*Martula dasypus*), 31. Sand Martin (*Riparia riparia*), 32. Crag Martin (*Riparia rupestris*), 33. Hodgson's Pied Wagtail (*Motacilla alba alboides*), 34. Yellow-headed Wagtail (*Motacilla citreola*), 35. Elwes's Horned Lark (*Eremophila alpestris elwesi*), 36. Long-billed Calandra Lark (*Melanocorypha maxima*), 37. Tibetan Skylark (*Alanda gulgula lhamarum*), 38. Rufous Short-toed Lark (*Calandrella brachydactyla dukhunensis*), 39. Short-toed Lark (*Calandrella Acutirostris*), 40. Hoopoe (*Upupa epops*), 41. Swift (*Micropus apus*), 42. Horned Owl (*Bubo bubo*), 43. Little Owl (*Athene noctua*), 44. Himalayan Griffon Vulture (*Gyps himalayensis*), 45. Lammergeier or Bearded Vulture (*Gypaetus barbatus*), 46. Kestrel (*Falco tinnunculus*), 47. Cherrug Falcon (*Falco cherrug*), 48. Eagle (*Aquila rapax*), 49. Tawny Eagle (*Aquila rapax*), 50. Pallas's Fishing Eagle (*Haliaeetus leucoryphus*), 51. Buzzard (*Buteo*), 52. Turkestan Hill Pigeon (*Columba rupestris turkes-tanica*), 53. Snow Pigeon (*Columba leuconota*), 54. Tibetan Sandgrouse (*Syrnhaptis tibetanus*), 55. Chakor (*Alectoris graeca chukar*), 56. Snow Cock (*Tetrao-gallus*), 57. Black-necked Crane (*Grus nigricollis*), 58. Brown-headed Gull (*Larus brunnicephalus*), 59. Tibetan Tern (*Sterna hirundo tibetana*), 60. Oystercatcher (*Haematopus ostralegus*), 61. Pamirs Lesser Sand-Plover (*Charadrius mongolus*), 62. Curlew (*Numenius arquata*), 63. Green Sandpiper (*Tringa ochropus*), 64. Redshank (*Tringa totanus*), 65. Temminck's Stint (*Erolia temminckii*), 66. Bar-headed Goose (*Anser indicus*), 67. Gadwall (*Anas acuta*), 68. Pintail (*Anas strepera*), 69. Brahminy Duck (*Casarca ferruginea*),

70. Goosander (*Mergus merganser*), 71. Great Crested Grebe (*Podiceps cristatus*).

DOMESTIC ANIMALS

The chief tame animals are *yak* (Tibetan hairy bull), *demo* (cow), *jhabbu*, *jemo* (female), Indian cow, and bull, horse, mule, ass, sheep, and goat. There goes a Bhotia saying that 'sheep, goats, and yaks are the chief crop and wealth of Tibetan.' Occasionally once in 7 or 8 years, when the snowfall is heavy, all pasture-lands are buried under snow for days together, and hundreds of animals from herds have no other alternative than dying of starvation and severe cold, as all domestic animals including dogs, sheep, horses, yaks, etc., are always kept in open compounds without roofs, even in the severest winter. Some people tame the cat (*billa*) as a pet and hen (*chhamu*) for laying eggs ; and pig is tamed in Central and Eastern Tibet. Manasa Khanda being a pastoral country, the dog plays an important role amongst the domestic animals. There is no household or tent without a dog. It keeps guard over the house and the catt'e. The Tibetan dog is very ferocious.

Yak is a great beast of burden and carries heavy loads even on bad roads and higher altitudes, but it cannot withstand the hot climate and dense air of lower altitudes nor can it be used for tilling the land. *Jhabbu* on the other hand can withstand hot climate and dense air of the lower altitudes, and the cold climate and the rarefied air of higher altitudes. It is useful both for ploughing the land and for carrying loads. So the Bhotias of the mandis in Tibet and the Tibetans of

Taklakot keep a good number of *jhabbus*. Some of the yaks and *jhabbus* with nose-strings are also used for riding.

STOCK-RAISING

Tibet is a big wool-producing country. Thousands of maunds of wool are imported to India every year from the Manasarovar Region and other parts of Tibet. All the woollen mills of Northern India and Bombay get the major part of their wool supplies from Tibet. Sometimes there are indents for Tibetan wool from foreign countries. If the wool produce of Tibet is controlled and improved scientifically, Tibet will become one of the finest and biggest wool-supplying countries of the world-market, like Switzerland. Besides supplying wool, the millions of sheep are the chief means of conveyance in and across the Himalayas for carrying enormous quantities of wool, salt, and borax from Tibet to India, and grain and miscellaneous goods from India to Tibet. Though Tibet is purely a Buddhist country by religion, half the diet of a Tibetan consists of mutton. There is a Bhotia saying that 'sheep are the goods-trains, ponies and mules mail-trains.' It is a pleasant sight to watch hundreds of sheep moving slowly with double panniers of salt or grain on their backs, going along the trails up and down the mighty Himalayas ranges, treading their weary way, picking up every now and then hurriedly a blade of grass here and a mouthful there. The approach of these laden sheep is often announced by the rising of clouds of dust and the peculiar whistlings of the Bhotia drivers and by the voice of the bells tied

to the necks of some of the animals, the tinkling of which sounds and resounds along the forest roads. Generally the Tibetan sheep are not unloaded till they reach the destination, for it is a very tedious business to load these shy and turbulent creatures.

Cheese (called *chhura* in Tibetan), butter, milk, and other dairy products of the Senge Khambab region are considered to be the best in the whole of Tibet. There are thousands of yaks and *demos* (Tibetan bulls and cows) and millions of sheep and goats in Tibet. Good dairy farms can be started on up-to-date scientific lines with great profit and advantage, as Tibet is mainly a pastoral country where the chief occupation of the people is cattle-breeding. Crude Tibetan cheese can be had at the rate of four annas per pound and butter at the rate of two rupees per pound. Butter is very badly stored in raw sheep-skins. Thousands of sheep—rather huge masses of sheep—can be seen moving and grazing on the shores and slopes of Manasarovar, spread over miles.

There is an interesting way of milking goats. They are made to stand in pairs facing each other neck to neck and are tied together. Then the milking goes on by drawing out the teat of the animals once or twice and the process goes on a number of times, for they cannot be milked at a stretch since they draw the milk in the udder after taking one or two jets. When they are fully milked, the loosely knotted rope is drawn out and the animals go out leaping and jumping hither and thither.

TRADE AND MARTS

There are several mandis or marts of Bhotia¹ merchants in Western Tibet, most of which are situated in the Kailas-Manas Region. These mandis are held for periods ranging from a fortnight to five months. Gyanima Mandi (also known as Kharko) of Johar Bhotias, Chhakra Mandi (also known as Gyanima Chhakra) of Darma Bhotias, Taklakot Mandi (also known as Pilithanka) of Chaudans and Byans Bhotias, Nabra Mandi of Niti Bhotias, and Gukung Mandi of the Nepalese are the biggest. Tarchhen (Kailas) and Thokar (or Thugolho—Manasarovar) and Gartok Mandis come next in order, of which the first two are big wool-shearing centres. Puling (of Nilang and Rampur Bhotias), Thuling (of Mana and Niti Bhotias), Lama-chhorten and Silti (of Darma Bhotias), and Pururav-Chhongra² (of Rongba and Limi Nepalese and Byans Bhotias) Mandis are still smaller. Gya-chhong (of Jumli Nepalese and of Toshar and Rosar Tibetans), Bojak-Chhongra (of Nepali Mugum-Khampas and of Rusra and Tosharta Tibetans), and Rungling-Chhongra (of Nepali Mugum-Rongbas and of Gerche, Yagra, Rundra, Tosharta, Bongba, and Karma Tibetans) are three more smaller mandis of Manasa Khanda, situated on the south-eastern side of the source of the Kupa chhu, where, mostly the borderland Nepali merchants go for trade. Hardly one or two Byans traders go to these marts as they are highly frequented by Tibetan

¹ Indian borderland of North Almora, North Garhwal, North Tehri, etc. is called Bhot. People of Ebot are called Bhotias. Bhot and Bhotias described in this book should not be confused with Bhutan State or the Bhutanese. Tibetans are called *Hunigas* by the Bhotias.

² This mandi is held on alternate years at Jakpolung in Nepal territory just two miles from the Tibetan frontier.

brigands. Gyanima is the biggest of the mandis in Western Tibet where a brisk transaction of about 25 lakhs of rupees is done annually. In almost all these mandis wool, coarse Tibetan blankets, sheep, ponies, mules, yaks, *jhabbus*, borax, salt, hides, etc., are either sold for cash or exchanged for the commodities of the Indian merchants, namely piecegoods, *gur* (jaggery), barley, wheat, rice, utensils, Chinese tea, etc. All the commodities which are available in Indian markets are procurable here. Shepherds from not less than thirty regions¹ come to Taklakot for trade.

All Tibetans, men, women and children, take to spinning at all spare times and weaving is done solely by women. Finer varieties of woollens are not produced in the Manas Region, as in other parts of Tibet. Every Tibetan, be he a householder or a monk, does some sort of business by way of selling and buying.

Mahatma Gandhi is considered by some monks to be the incarnation of the great *Tantrik* teacher Guru Padmasambhava. He is called Gandhi Maharaja by Tibetans. A coarse type of hand-woven white cloth sold in the mandis is called 'Gandhi-khaddar.'

There are marauders and freebooters of nomadic tribes everywhere in Tibet. They are shepherds wandering from place to place with their sheep, ponies, yaks, kith and kin, and some of them move towards

1 1. Hor-Toma, 2. Hor-Taling, 3. Hor-Toshar, 4. Hor-Pangriya, 5. Hor-Gyeva, 6. Toshar, 7. Rundra, 8. Bongba, 9. Shungba-Majin, 10. Diji, 11. Songkora, 12. Seli-phuk, 13. Gerke, 14. Chukchang, 15. Yagra-ningba, 16. Yagra-mema, 17. Sokcho, 18. Rosra, 19. Tarkop-Lharkep, 20. Baba, 21. Sakya, 22. Nakchang, 23. Ngabri, 24. Bokaho, 25. Bokto, 26. Markam, 27. Lhasa-Shigartse (Bodpas), 28. Kham, 29. Amdo, 30. Limi, 31. Rongba, 32. Jamli, etc.



45. Gourikund (Thuki-Zingboo), frozen almost all the year round
[See p. 14]



46. Sounding the Lake Gourikund [See p. 14]



47. Mount Kailas from Silung Gomp and the Conglomerate Neten-yalak-jung
[See p. 17]



48. Mount Kailas from its Southern Foot [See p. 15]

Kailas and Manasarovar also for trade and pilgrimage between the months of May and October. Since no restriction is imposed by the Tibetan Government as regards possessing arms, these nomads carry swords, daggers, old Tibetan matchlock guns, Russian and German pistols, revolvers and rifles with plenty of gunpowder and cartridges. When they come across any unarmed traders or pilgrims they loot them and make good their escape into some ravines or to some distant places. The Tibetan Government make no adequate arrangement to arrest them, nor the Indian Government give any protection against these free-booters through the Trade Agent. This unhappy menace reached its climax in 1947 and 1948, when scores of Indian traders and poor pilgrims were looted by Tibetan brigands; and one *sadhu* was shot dead for not surrendering his belongings. The Indian Trade Agent's party, consisting of 90 members including pilgrims, was attacked by eleven armed dacoits, in midday, on August 5, 1948, when a pitched battle took place for 2½ hours and several rounds of rifle bullets were freely exchanged between the two parties. The I. T. A. was so nervous that he had let loose the dacoits who were actually caught and handcuffed. The result was that several more dacoities were committed by the same gang of brigands. In Taklakot, the second biggest mandi in Western Tibet 25 night thefts were committed by Tibetans and the Zongpon (Governor) of Taklakot recovered all the stolen property worth about seven thousand rupees from the thieves, but nothing has been done by the I. T. A. to recover the stolen property to the Indian merchants.

CURIOS OF MANASA KHANDA

The following is a list of articles that could be secured from this Region and the visitor can make a choice according to his taste. 1. Full-skin of snow-leopard (*chen*). 2. Full-skin of lynx (*yi*), these cost anything between 20 and 50 rupees each. 3. Full-skin of fox (*haje*) costs 2 to 6 rupees and is used for caps. 4. Lamb-skins (*charu*) used for making waistcoats and overcoats, each costs a rupee. 5. *Bungchar* or bigger lamb-skins, used for making *asanas*. 6. Sheep-skin, 7. Goat-skin, 8. Skin of a *goa* (Tibetan wild goat), costs a rupee each. 9. *Chutka*, heavy Tibetan rug, woolly on one side, costs 15 to 45 rupees. 10. *Thulma*, finer type of rug, prepared in Johar, costs 20 to 40 rupees. 11. *Pankhi* or *chadar*. 12. Carpet, 13. Thin or thick rope made of yak-hair, costs up to a rupee and a half, 14. Yak-tail or *chamar-punch*, 15. *Zaharmora* stone or serpentine, 16. *Thaneri-patthar*, a soft stone, used for boils on the breast. 17. *Himaphuli* (calcite), 18. *Nirbishi*, a variety of aconite, a drug used for scorpion sting, etc. 19. *Thuma*, an aphrodisiac drug. 20. *Jimbu*, dried Tibetan onion leaves for seasoning purposes. 21. Silver stand and lid for tea-cup. 22. Wooden tea-cup, silvered inside. 23. Tibetan folding table (*chokse*). 24. Tibetan silver spoon. 25. *Korlo*, Tibetan prayer-wheel. 26. Silver talisman-casket (*gau*). 27. *Mani*-stones. 28. *Pobar*, incense ladle. 29. *Polang*, incensory or incense pot. 30. Tibetan tea. 31. *Lham*, Tibetan full-boot, either for men or women. 32. *Thanka*, Tibetan banner-painting. 33. *Phing*, Tibetan vermicelli, prepared from specially treated pea-flour. 34. Musk. 35. Tusks of Musk-deer. 36. *Kangri Karchhak*, Tibetan Kailasa *Purana*, can

be had either from Dira-phuk Gompa or Gengta Gompa. 37. *Khochar Karchhak* or *Khochar Purana*, can be had from Khochar. 38. *Bhurja-patra* (bark of a birch tree) can be had from any person either in Garbyang or Budi. 39. *Tanka* and other coins. 40. Samples of *thing*, *geta*, *puruk*, *numbu*, etc.—superior varieties of woollens. On their onward journey to Kailas, pilgrims should request some merchant at Taklakot to get the articles of their choice ready by the time they expect to return or they may request him to send the goods by post to their homes at his convenience.

CHAPTER V

ADMINISTRATION

DALAI LAMA

Tibet is a part of Chinese Republic and is ruled by Dalai Lama, and a Council of Ministers acting under the advice of the Chinese Resident. It is said that the first Dalai Lama was born in A.D. 1391, while some others say that this system came into existence in 1284. Dalai Lama is the spiritual head of not only Tibet but also of Bhutan, Sikkim, northern borders of Nepal, Ladakh, Spiti, and parts of Mangolia, China, Sinkiang (Chinese Turkistan), and Russia. It was the fifth Dalai Lama (1610-81) who declared himself to be the Divine Incarnation of the *Bodhisattva* Avalokiteshvara. Since then this system is in vogue. The thirteenth Dalai Lama died in December 1933 and the fourteenth Dalai Lama was born in June 1935, in Kum-bum and was installed on the throne in the Potala Palace at Lhasa on February 22, 1940. Dalai Lama is the political head and the Tashi Lama, whose headquarters is at Tashi-Lhunpo at Shigartse, is the temporal head. Tashi Lama is considered to be the incarnation of Amitabha Buddha. He is more popularly known as Panchhen Lama or Panchhen Rinpoche.

GOVERNMENT

Western Tibet is governed by two *Garpons* or *Urkos* (Viceroys), one senior (*Urko-Kong*) and one junior (*Urko-Yok*). The summer capital is Gartok and

the winter capital Gargunsa. Western Tibet is divided into four provinces, namely Rudok, Purang-Taklakot, Dapa, and Chhabrang, each in charge of a *Zong* or *Zongpon* (officer of the Fort or Governor). A major part of the Kailas-Manasarovar Region is under the jurisdiction of Purang Zong and the tract west of Chhakra Mandi is under the jurisdiction of Dapa Zong. There are about 55 Zongs in the whole of Tibet.

Besides these, there are *Chhasus*, or Tax Collectors in trade centres, *Yung-chhongs* or Government Trade Agents or Traders, and *Tasams*, *Tazams* or *Tarzams* (Post-stages or conveyance-offices and officers) who are to promptly supply transport-animals to Government officials going up and down. These *Tasams* convey State mails also between Lhasa and Gartok and other Government centres. Out of the 25 *Tasams* stationed along the Lhasa-Gartok highroad seven are in the Kailas-Manas Region. Since the year 1935 or so, regular postal stamps have been in use for conveyance of letters and parcels from Lhasa to various Government centres. A special officer called *Shipjo* or *Kashyap* visits Western Tibet once in 30 or 35 years for looking after and settling all affairs of the State up to the petty village-dispute. He tours in the country for nearly a year. He last visited this Region in 1944-45.

All the above mentioned officials are appointed direct from Lhasa for a term of three years, which may be extended by one or two more terms in some cases. The administration of villages and wandering tribal camps is carried on by *Gopas* or *Gobas* (headmen) and *Magpons* (Patwaris) over groups of villages. *Gopa* is appointed every year or every three years and *Magpon* is a hereditary post; and these two posts are held by men

of the villages concerned. None of the officials is paid by the Central Government at Lhasa; on the contrary, these officials have to pay certain fixed amounts to the Central Government, and they have to raise this sum as well as their own profit from the civil, criminal, and revenue administration of the regions under their jurisdiction. Besides this income all officials have their own enormous personal trade, for which they get conveyance free of charge from the *Tasams*.

For simple offences the hands of the culprit are tightly tied together with a woollen rope until they start bleeding, he is stripped off his clothes and is awarded 40 to 300 lashes on his buttocks and legs. For serious offences like dacoities the hands of the offender are cut off at the wrists and then dipped into boiling oil in order to prevent the wound from becoming septic; for more serious crimes and for political offences against the State, the accused is brutally killed by red-hot iron rods being thrust into the temples and by the removal of eyes, or by being hurled down from the top of a steep rock or hill. In all these cases flogging precedes and it is so severe that the culprit often succumbs to death. In murder cases the culprit is not only whipped to death, but also tortured by thrusting pins into the fingernails, by smashing the joints with a hammer, and by many other different ways. One murderer was put to death at Taklakot like this in 1947. One monk by name Serka-Mutup, who organized an agitation to stop *begari* or free-service to the monastery, was whipped to death by the *Labrang* of the Simbiling Gompa in 1943. One turbulent Bhutanese was similarly flogged to death by the Purang Zong in 1947. Oftentimes both

the parties in a case are heavily fined and such fines form a great source of income to the officers. After the judgment of a case is given, both parties shall have to pay a court fee of eight *tangas* each. Bilboes, handcuffs, pillory, whips, ropes, and thick leather flaps (tied to a small stick to slap on the cheek), etc., are kept hanging at the gate of the officers.

In Tibet, only a few commodities are taxed. For every six or eight sheep that are sheared and for every six or eight sheep-loads of borax or salt, one *tanga* is collected as tax by the *Chhasu*. There is no land tax ; but it is not to be understood that the government is liberal ; as a matter of fact the whole blood of an ordinary peasant or shepherd is sucked out both by the Government officers and by the monks of monasteries by way of extracting free-service for everything and by realising 25 to 100 per cent interest on tea and other goods which are forced on them by the officers concerned.

Over one-half of the Government posts are held by monks. Women are not debarred from holding high Government posts, including even those of Viceroys and Governors. There is practically no standing army or regular police either at the Viceregal centre at Gartok or the Governors' centres, though of late efforts are being made at Lhasa to maintain a regularly-trained police and military force. Whenever an emergency arises, men are mustered from villages, since all Tibetans know the use of firearms.

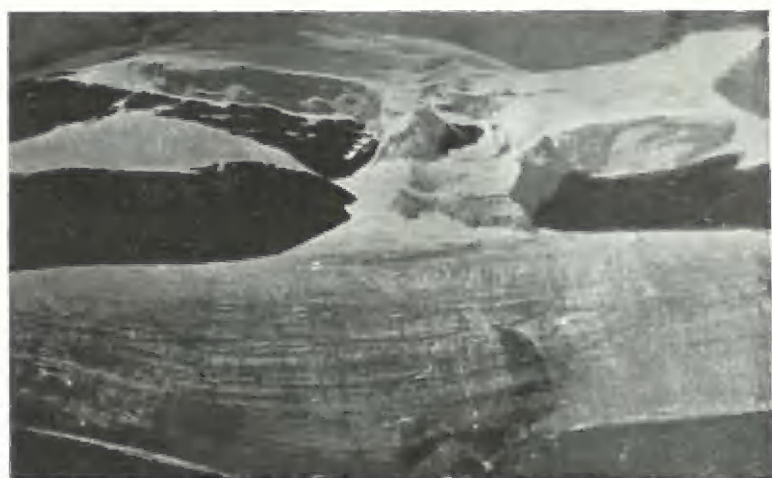
Taklakot is the headquarters of Purang Zong and is at a distance of 11 miles from the Lipu Lekh pass, on the Indian border. On the top of a hillock are the quarters of the Governor and the famous Simbiling

Monastery. There is a prison-house inside the Zong's building, where whips, handcuffs, etc., are stored. On the narrow plateau, called Pilithanka, situated at the foot of the hillock, is held a big mandi from the month of June to October. Indian Bhotia merchants hold the market in walled enclosures made of stones or sun-dried bricks. Tents are set up temporarily over the walls, since according to the treaty of 1904 made between the British and the Tibetan Government, Indians are not allowed to construct roofed houses in Tibet. It is high time that the Indian Government should get this bar annulled.

Trials are being made by me for the last ten years to secure the permission of the Tibetan Government for the construction of a *dharmashala* on Manasarovar at Thugolho. Though I could not get the necessary permit as yet, I hope to make some sort of arrangement with the authorities of the monastery to complete the work in a year. I have, however, completed the construction of a spacious *Yajna Vedi* (platform, the foundation of which was laid in 1941). *Havan* is performed there on *Shree Krishna Janmashtami*, *Shravani*, and other festive occasions.

INDIAN TRADE AGENT

Under the orders of Lord Curzon, Colonel Young-husband led an expedition and invaded Tibet in 1903. Thousands of Tibetans were shot down with the British machine guns. The Dalai Lama fled away from the Potala Palace at Lhasa and a treaty was forced on the Tibetans in August 1904. Later on in 1906, 1907, and 1912, some more treaties were made

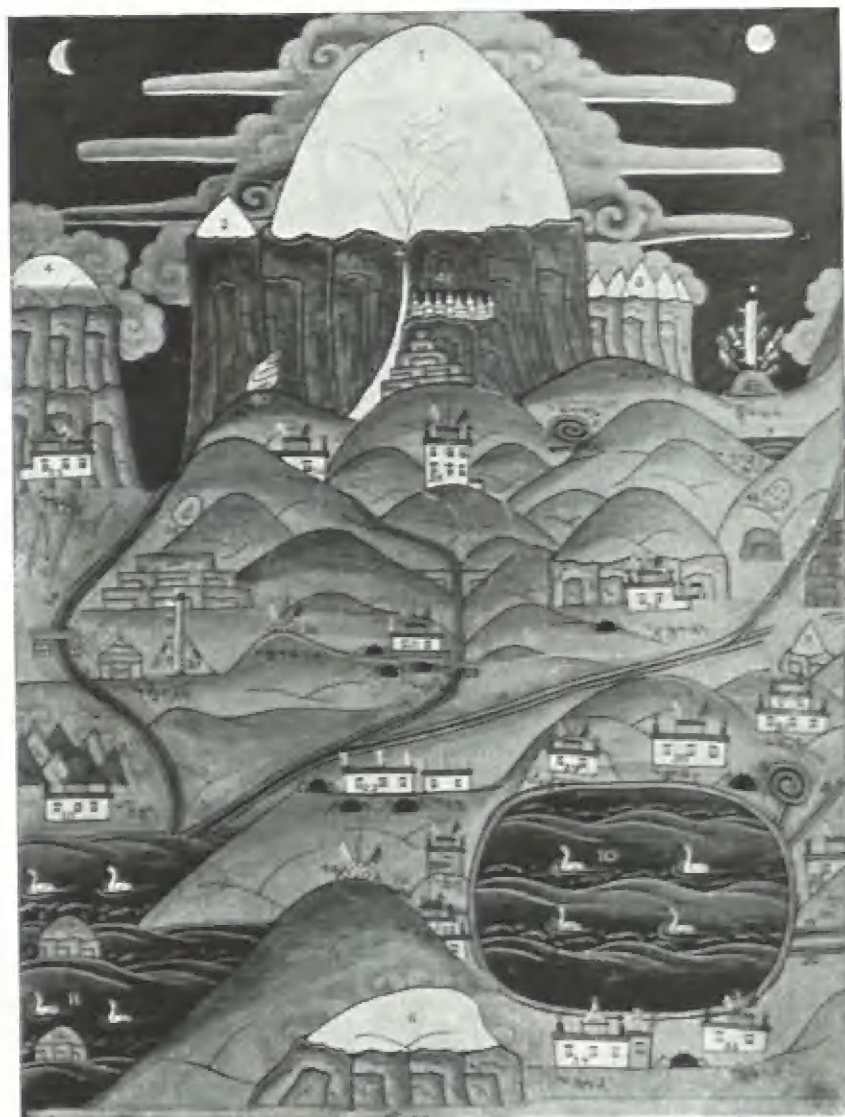


49. A Glacier at the Eastern Fort of Mount Kailas [See p. 17]



50. Cygnets in Captivity [See p. 31]





51. Central part of Kailas-Manasarovar Region, from a Tibetan Painting.
Drawn by Lama Nao-Kushok [See pp. 9-10, 27, 28]

between the two governments, by which the British had manœuvred to completely sever the nominal suzerainty of China over Tibet, which China now claims to have regained after the Britishers had relinquished their hold on India.

According to the same treaty three British Trade Agents were appointed—two in Central Tibet with headquarters one at Gyantse with a contingent of 100 soldiers, and the other at Yatung, and one in Western Tibet with headquarters at Gartok for six months—it is said, to look after the interests and grievances of the Indian traders who hold markets in Tibet every year. But nothing has been done for them since the British Government did not like to put any pressure on the Tibetan Government on the score of the Indian merchants. As a matter of fact, in the years 1943 and 1944, there were three cases in which Indian traders were flogged by the Tibetan officers, contrary to Treaty rules ; one Bhotia boy was shot dead by a rowdy servant of the Tibetan Government Trader, in 1947. But no proper action has been taken by the Indian Government so far. Now that the popular government has come to power, the Indian traders expect some redress from the atrocities of the Tibetan officials and highway robbers and marauders. The Indian Government should now have a strong Agent with a small contingent of 25 soldiers to safeguard the interests of the Indian traders in Western Tibet. The Trade Agent of Western Tibet starts from Gangtok in the month of May, goes to Gartok, visits the important marts, goes again to Gartok, and returns back to India by some convenient pass in the month of November. Since the attainment of Indian Independence on August

15, 1947, the name of the British Trade Agent has been changed to Indian Trade Agent. A travelling Post Office accompanies him delivering and despatching mails once a week during his stay in Western Tibet. Garbyang (30 miles from Taklakot) and Milam (65 miles from Gyanima) are the Indian Post Offices nearest to the Kailas-Manas Region. There are post and Telegraph Offices and Telephone connections with India, both at Lhasa and Gyantse.

CURRENCY

Tanka or *tanga* is the common silver coin in use throughout Tibet. Half *tanga* called *jav* is also current. The copper coins in use in Tibet are *khagang* ($\frac{1}{8}$ *tanga*), *karmanga* ($\frac{1}{3}$ *tanga*), *chhege* ($\frac{1}{2}$ *tanga*), and *shogang* ($\frac{2}{3}$ *tanga*), which are exchangeable only at Lhasa. Since the year 1934, currency notes and silver rupees have been in use at Lhasa. Indian rupees are freely used everywhere in Tibet in transactions. Tibetans prefer the Indian rupee to their *tanga*. The present rate of exchange is 4 *tangas* per rupee in Western Tibet. The Indian rupee is called *gormo* in Tibetan. For the convenience of transit, Tibetan officials take the Indian currency notes with them when they go to Lhasa, as these are freely exchangeable there. Nepali *mohar* and rupee are also exchangeable in the mandis.

KASHMIR AND TIBET

The King Lalitaditya, who ruled over Kashmir from 699 to 735, invaded Central Asia and Tibet and annexed a major part of Western Tibet including

Ladakh. Thus Buddhism was introduced into Tibet from Kashmir also. In fact several *Pandits* from Kashmir went to Tibet to preach Buddhism. Siddha Milarepa's grand guru, the great Tantrik teacher Naropa was a Kashmiri *Pandit*. The *Brihaspati* cycle of sixty years was introduced into Tibet by the Kashmiri *Pandit* Somnath.

GENERAL ZORAVAR SINGH

One, Raja Ranjit Dev, a Dogra Rajaput, was the Chief of Jammu in the middle of the 18th century. His younger brother was Surat Singh who had three grandsons : Gulab Singh, Dhyān Singh, and Suchet Singh. These three brothers served in the Durbar of the Maharaja Ranjit Singh and earned a good name. In the year 1820, Gulab Singh, took service as a horseman in a band commanded by Jamadar Khushal Singh ; and shortly afterwards became the running foot-man under Maharaja Ranjit Singh's eye. The next year, Gulab Singh obtained a petty command and came to prominence by seizure of the turbulent Mohammedan Chief of Rajoree. As a result, Jammu was granted to Gulab Singh as a Jagir ; the state of Pūnch was given to Dhyān Singh ; and the region of Ramnagar was given to Suchet Singh.

Generally Raja Gulab Singh used to stay in the hills and expand his own authority over other Rajputs. Zoravar Singh, Raja Gulab Singh's Commander-in-Chief in Kishtwar, took advantage of the internal troubles and disorders in Leh, the capital of Ladakh (the westernmost province of Tibet), and proceeded

there early in the year 1835. He sided one of the contending parties, deposed the reigning Tibetan Chief, and set up the Chief's Minister in his place. Zoravar Singh then occupied the fort and placed a garrison in it and fixed a tribute of Rs. 30,000 to be paid to Raja Gulab Singh by the newly appointed Chief. He annexed some more districts that lie along the northern slopes of the Himalayas to Jammu Raj and returned to Jammu by the end of 1835.

The deposed Chief of Ladakh made a complaint to the Chinese authorities in Lhasa and appealed that his State might be returned to him. But, since the tributes due to the Chinese authority were being regularly paid by his successor, no action was taken regarding the complaint.

Before the death of Maharaja Ranjit Singh, Raja Gulab Singh took into his hands, the complete control of Jammu and territories he annexed so far. In the year 1840, Zoravar Singh annexed the whole of Little Tibet to Jammu Raj. He wanted to invade Yarkand and sent word to the Dalia Lama at Lhasa to surrender the Province of Rudok, Purang, and Kailas and Manasarovar regions. In the months of May and June, 1841, he proceeded south-eastwards of Leh into Western Tibet, pillaged all villages and gompas (monasteries), destroyed every fort on his way, and occupied the valley of the Indus and the Sutlej up to the sources of these rivers including Kailas and Manasarovar; and fixed a garrison at Taklakot close to the frontiers of Nepal and Almora District. The trade of the Bhotias of Almora and Garhwal Districts was greatly affected, as Zoravar Singh wanted to monopolize and divert the whole wool-trade of Western Tibet to

Jammu. At that time the Government of Nepal also wanted to enter into an alliance with the Raja of Jammu and the Lahore Government in order to annex Tibet. This the British Government very much dreaded, firstly because such a pact behind the Himalayas would be a menace on the Indian border, and secondly because the British Government was at war with China at that time. So the British Government put pressure on the Sikh Raja at Lahore and the Raja of Jammu ; and deputed J. D. Cunningham to see that the territory of Gartok was restored to Lhasa Government in the month of December and Zoravar Singh recalled. Unfortunately to one party and fortunately to the other, Zoravar Singh was attacked and killed at Toyo in the month of December, an account of which is given below. On the representation made by the Bhotias, Trail, the Commissioner of Kumaon went up to Kalapani with a few soldiers, but did not proceed to Taklakot. Nothing is definitely known as to what had happened to his mission.

General Zoravar Singh established his headquarters first at Tirthapuri (about 36 miles west of Kailas) and with 1,500 men fought a great battle near Barkha (midway between Kailas and Manasarovar) against the Tibetan forces of 10,000 (?) soldiers, in which he utterly routed them, and followed up his victory by destroying the forts on the way ; and advancing to Taklakot he set up a fort of administration, the ruins of which are still to be seen. The ruined columns of the forts at Gyanima, Palkya (present Guru-gem), Harkong, Kardung, Purbu, outside the village Kungarto, at Kyangmar on the way to Siddi-khar, near Tag-chhuten, and at Pomo-phuk are still there facing

the onslaughts of time. The ruined columns of the fort at Parbu, are over 40 feet high.

After some days, Zoravar Singh left Taklakot with his wife to leave her in Ladakh, having kept his army under his subordinate Captain Bastiram. Zoravar Singh took only a handful of soldiers with him, as he wanted to return back to Taklakot to annex the remaining part of Tibet after the abatement of winter. He accompanied his wife as far as the Gartok. On his return,¹ he was attacked at Toyo (3 miles from Taklakot) by a big army sent by the Chinese to assist the Tibetans, to drive back General Zoravar Singh. Thus he was taken by surprise but still he fought so bravely and tactfully to the end, that the Tibetans believed that Zoravar Singh possessed superhuman and mystic powers and that he was a *Tantrik*. According to Tibetan traditions, such man of mystic powers cannot be shot with leaden bullets but should be shot with bullets made of gold, as such it is said that Zoravar Singh was put to death with a gold bullet from the window of the *Magpon's* (Patwari's) house. The General was wounded in the knee and fell down from his horse. There is another version current in the Purang valley regarding the death of General Zoravar Singh. It is said that one of his servants who was badly treated by him and who had therefore a grudge

¹ According to another version Zoravar was attacked at Toyo on his way to Ladakh. A third version is this: Zoravar left his wife on the shores of Manasarovar near Nyava-ngopo-dupuk (see Map No. 4) in a house specially constructed for her, the ruins of which still exist. When Zoravar was murdered at Toyo, it is said that she got blood out of her breasts instead of milk. Seeing this bad omen she was apprehending that something untoward had happened to her husband. Shortly afterwards Tibetan soldiers spotted and murdered her on the spot.

against him wanted to take revenge, took Zoravar Singh by surprise when unarmed and stabbed him to death.

On the southern side of Manasarovar, situated in the upper part of the Namreldi valley are some caves, where the panic-stricken people of the southern bank of Manasarovar, took refuge during the severe cold weather, when Zoravar Singh invaded Manasarovar Region on his way to Taklakot.

One testicle and a piece of flesh of the fallen commander are still preserved in the Simbiling Monastery of Taklakot. They are kept under lock and key with the *Dazang* (manager) of the monastery and are taken out once in four years, in the second month of Tibetan calendar (March-April), on the occasion of some special *Tantrik* rite called *Chakhar* (iron-fort). One hand (wanting in two fingers) is preserved in the Sakya Monastery situated on the west of the Simbiling Gompa and it is open to public. It is said that some heads of Zoravar's soldiers are entombed in the *chhorten* situated in the bend of the road before entering the village Magrum.

The extraordinary courage and presence of mind exhibited by him, elicited the profound admiration of even the Tibetans, who, in order to perpetuate the memory of so great a General's association with Tibet, constructed a memorial in the village Toyo in the shape of a *chhorten* or *Samadhi* (a closed-up structure, corresponding to the Indian *Stupa*), wherein are kept the remains of the dead General. This is a unique case in the history of the world where a memorial was erected by the conqueror for the gallant enemy. The memorial is painted with red ochre (*geruva*) annually

by the Tibetans and homages paid with incense, etc. The photographic representation given in the book will convey a rough idea of the tomb. As the structure was erected with *kachha* materials (namely sun-dried bricks, mud, and stones), needless to say that it has weathered and worn out considerably and what remains at present is most miserable-looking, a mere apology of a memorial, which hardly does credit to the fair name of Kashmir nor can honour the distinguished General in the way it deserved. I would suggest the Kashmir Government, the effecting of such improvements and repairs to the same, as are calculated to present not only a decent appearance but endow it with sufficient strength, and durability, and enable it to withstand the onslaughts of time and rough weather. We are sure that the Kashmir Government will take that interest in the restoration of the monument of this worthy soldier of Kashmir, which it richly deserves, and may glory be unto the proud name of the house of Kashmir. The Tibetans in the Purang-Taklakot valley, up to this day speak very high of this great General and worship his tomb. Even the Nepalese and the Bhotias speak very high of the General. Zoravar Singh is called 'Singi-Gelbo' (Raja of lions), 'Singi Raja,' or 'Singba' by the Tibetans. Général Zoravar Singh's death centenary was celebrated on October 30, 1942 at Taklakot, under the auspices of the Darma Seva Sangh, when I had exhibited some of the shields, armours and other articles of Zoravar collected from the villagers in the Purang valley. The two big *chhortens* that are situated by the road-side in the village of Chhemo-Chhorten (between Toyo and Takla-



52. Gossul Gumpa, the first Monastery of Manasarovar



53. Sunrise on the Celestial Lake

[See p. 7]





54. Thugholho Gumpa, the Eighth Monastery of Manasarovar, the Headquarters of the Author in Manasa Khanda [See pp. 280, 281]



55. 'Janma-Bheemi' (Rubber Boat) on the Holy Manas [See p. 165]

kot), are said to contain the remains of the Lieutenants of Zoravar Singh. According to some other version these tombs contain the remains of Zoravar Singh's soldiers; the information, however, is not very authentic.

After Zoravar Singh was thus killed, the Tibetan army marched towards Taklakot. So, Capt. Bastiram, with a few followers left Taklakot for Pala, whence he fled over the Lipu Lekh pass. The cold weather was so severe and the situation so miserable that the vanquished soldiers had to burn the stumps of the muskets to warm their benumbed hands. Most of the soldiers perished in snow and Captain Bastiram reached India with a few men to tell his woeful story. The soldiers had to sell their swords, helmets, and armours for handfuls of provisions, some of which are still preserved in the houses of the Bhotias of Byans and Chaudans and of Rajbar of Askot. Some of the guns, armours, helmets, swords, etc. of Zoravar Singh and his soldiers are, up to this day, preserved in the Simbiling Monastery of Taklakot and in the Monasteries of Nyanri and Gengta of Kailas, Khyunglung Gompa, and in the houses of Kirong and Toyo Magpons. -

The Tibetan army captured some of the soldiers of Zoravar Singh, most of the captives being Mohammedans took them to Lhasa. It was said that they were well treated by the Tibetan Government, excepting those, who were mercilessly put to death for actually taking part in breaking the idols in the monasteries. Those Mohammedan soldiers had settled down at Lhasa and form the Mohammedan population there and they own a couple of mosques.

In all propagandist zeal to damn the Tibetans, Charles A. Sherring, Deputy Commissioner of Almora, describes the horrors of their cruelties in the blackest colour possible. He writes: "The General established his headquarters first at Tirthapuri, and with 1,500 men fought a great battle near Barkha, against the Tibetan forces of 8,000 men, in which he utterly routed them, and followed up his victory by plundering monasteries". "As for the fallen Commander-in-Chief the story goes that the Tibetans rushed upon him and pulled out his hair, which was like eagles' feathers all over his body as they wished to keep it for the sake of future good fortune. Further his flesh was cut up into small portions and every family in the district took a piece and suspended it from the roof in the houses, the idea being, that the mere presence of the flesh of so great a man must of necessity confer a brave heart on the possessor. Rumour also says that the pieces sweated fat for many a long day, a sign which the most sceptical regarded as connected with the dead Chief's bravery."

I cannot say how far these statements of Sherring are true, since I did not come across anybody in the whole of Purang valley or Western Tibet who could support the above statements, though I sojourned in Kailas-Manasarovar Region all the year round on two occasions and have been visiting the Region for the last 23 years. Sherring further writes that "Zoravar Singh had a handful of men with him when he was wounded in the knee and fell down from his horse at Toyo." "His men seeing themselves outnumbered, threw down their arms, begging for mercy. The only reply was a deliberate decapitation of every man, as if they were

so many sheep. The whole Sikh army of many thousands of soldiers lost all heart and surrendered, and the men were beheaded in the most brutal manner possible. Bastiram with a few followers fled from his stronghold to Pala." It seems that in spite of being the Deputy Commissioner of a District, Sherring obviously forgot all Mathematical sense, in exaggerating the cruelty of the Tibetans for, on the one hand he says, that Zoravar had "a handful of men" when he was at Toyo, that the whole army of Zoravar consisted of 1,500 men, and that Bastiram took some of them with him to Pala, and on the other he hazards the statement that "many thousands of Sikh soldiers were beheaded in the most brutal manner possible." Now, sir, tell me wherefrom "many thousands of Sikh soldiers" came to Taklakot or Toyo, and how many thousands of Sikh soldiers were decapitated by the "cruel Tibetans". Certainly there were no aeroplanes at that time with Raja Gulab Singh nor were there parachutes. No doubt, the Tibetans killed those Mohammedan and other soldiers of Zoravar Singh, who took active part in plundering monasteries, in breaking idols and setting fire to them, and in raping the innocent and peaceful villagers. There is nothing extraordinary in it, since even in these days such acts are awarded with similar punishment. Any way, the number of Zoravar Singh's soldiers who were killed by Tibetans and the cruelty with which they were killed cannot surpass the havoc created by Col. Younghusband—thousands of Tibetans who were burnt to ashes like so many moths and insects by the machine guns and cannons of the religious and generous hearted Colonel, who led the expedition to Lhasa in 1903-04, 62 years after the Tibetans committed atrocities on Zoravar Singh's men.

During the succeeding spring, of 1842, the victorious Tibetans advanced along the Indus, took back their own Provinces and besieged Leh, the capital of Ladakh. At last in the month of September, Raja Gulab Singh's Commander besieged the Lhasa general somewhere between Leh and Rudok, and so a peace was concluded to the effect that Ladakh should remain Raja Gulab Singh's State and other territories east of Ladakh should belong to Tibet; and the wool-trade of Western Tibet to British Provinces should remain as before. Later, on 16-3-1846, according to a treaty concluded between the British Government and Raja Gulab Singh the latter bought the Province of Kashmir from the former on payment of 75 lakhs of Nanakshahi rupees and was made the Maharaja of Jammu and Kashmir. According to the article 11 of the treaty, Maharaja Gulab Singh acknowledged the supremacy of the British Government and in token of their supremacy agreed to present annually to British Government one horse, twelve perfect shawl-goats of approved breed (6 male and 6 female) and three pairs of Kashmir shawls. It may be noted in passing here that the Sikhs ruled over Kashmir from 1819-45.

LOPCHAK MISSION

Long before the annexation of Ladakh to Jammu and Kashmir State, the Vassal Chief of Ladakh used to send a trade mission called Lopchak Mission to Lhasa, every third year, in order to encourage trade relations between Lhasa and Ladakh, a distance of about 1,100 miles. One merchant of Ladakh used to get a financial aid of about Rs. 6,000 to meet the transport expenses for the long journey. In a similar way the Lhasa Gov-

ernment also used to send a reciprocal Mission to Ladakh. The Chief of Ladakh used to send some curios of Ladakh as presents to the Dalai Lama through this Mission and the Dalai Lama in turn used to send some curios of Lhasa to the Chief of Ladakh. After the final annexation of Ladakh to Jammu and Kashmir by the Maharaja in the year 1842, the Maharaja has continued the Mission. After the intervention of the British in the State affairs, the British had begun controlling the Mission, though it was the Maharaja who was actually giving the grant-in-aid to the Mission in order to wield greater influence on Tibet, in which the British had a marked success. After the withdrawal of the British from India and the subsequent accession of Jammu and Kashmir State to the Indian Dominion, naturally the interest and responsibility in the said Lopchak Mission (being a subject of External Affairs Department) now devolves on the Indian Dominion. For the last few years I don't know exactly as to how the Mission is being conducted and where it stands now.

RAVAGES OF KAZAKI NOMADS OF RUSSIA

Kirghiz-Kazaks are a people spread over the territory bordered by the rivers Volga and Irtysh, Chinese Turkistan, Sir-Darya, and Aral and Caspian seas. It is a vast steppe of 8,50,000 square miles in area, barren, stony, marshy, and full of brackish lakes. Kirghiz are Turkish by race and speak a separate dialect of Eastern Turkistan. Their population is about 32,00,000. They are noted for their unbounded love of adventure and wit. As nomads, they have retained most of the characteristics of their race. They still abhor settled life and cannot be persuaded to settle and live by agriculture. Though

Islam has never taken a firm hold on them, they are classed Mohammedanis. In 1920 the Russian Government formed the autonomous Kirghiz Republic, which in 1925 became Cossack Republic and the Kirghiz Republic.

It is interesting to note that in the year 1941, exactly 100 years after General Zoravar Singh, over 3,000 nomad brigands from Kirghiz-Kazak entered Tibet and plundered and swept off the whole of Western Tibet. About the year 1938 these Kazaki nomads left their native land with their kith and kin, bag and baggage, *namda*-tents, and camels; travelled for nearly three years in Sinkiang and Chinghai (Koko-Nor) Provinces; crossed the Kunlun mountains and entered Changthang (northern Province of Tibet) in the early part of the year 1941. Camping somewhere near Tamsang on the river Brahmaputra, two batches of 18 men each, mounted on horses and armed with rifles and revolvers tried to force their way into Nepal; but the vigilant Gurkha soldiers posted on Nepal borders booked some of these bandits. So they gave up the idea of entering Nepal and proceeded towards Mahasarovar.

These Kazaki bandits pulled down several monasteries on their way and used the timber of those buildings as fuel and threw to winds or made bonfires of hundreds of sacred books. I picked up several scattered leaves of these books. At places they burnt down the prayer flags flying on the tops of monasteries. Amongst the several affected people I met, one was a noted incarnation-lama of Ladakh, who related his woeful story to me. He was returning from Lhasa after completing the Doctorate of Divinity to his native land. Near about Mayum, he was plundered of his 110 loaded pack-mules which include

several gold and silver images, and silver in the form of coins. The Lama and his 18 followers were left almost naked. The royal edition of *Kanjur* and *Tanjur* consisting of 108 and 235 volumes respectively, worth several hundred rupees, were thrown to winds most mercilessly. When they reached Manasarovar they were camping on the northern side, spread over a distance of 15 miles; and they were in possession of over a lakh of sheep, 4,000 yaks, 2,000 ponies and mules, 500 rifles and guns, and large quantities of ammunition and some lakhs of rupees worth of gold and silver in the form of images, jewellery, precious stones, and coins. Till these Kazaki brigands reached the northern shores of Manasarovar, I was in Thugolho Monastery (on the southern shores of the Manas) from July to the middle of September.

Since the Bhutanese Officer at Tarchhen, at the southern foot of Kailas, was fully equipped with fire-arms and ammunition and had garrisoned his building, the dacoits did not dare to approach Tarchhen or any of the monasteries of Kailas. Camping between Kailas and Manasarovar, the bandits wanted to enter Purang-Taklakot Valley and then force their way into the Indian frontier through Lipu Lekh pass. As a preliminary step two batches of 18 armed mounted gangsters along with 45 more unarmed mounted men (to carry the booty) marched to Tsepgye Gompa of Rakshas Tal. The leader of the gangsters, a woman in red uniform, and another male member of the party were shot dead on the spot by the three inmates of the gompa who gave a tough fight from inside. The heads and hearts of the culprits are preserved in the monastery as trophies and the bodies buried nearby. So the Purang valley and the Indian border were saved from being swept away by their

ravages. These Kazakis used to kill mules and ponies for their meat instead of sheep and goats and used to force the Tibetans to eat the same, which they abhor as a sacrilegious act.

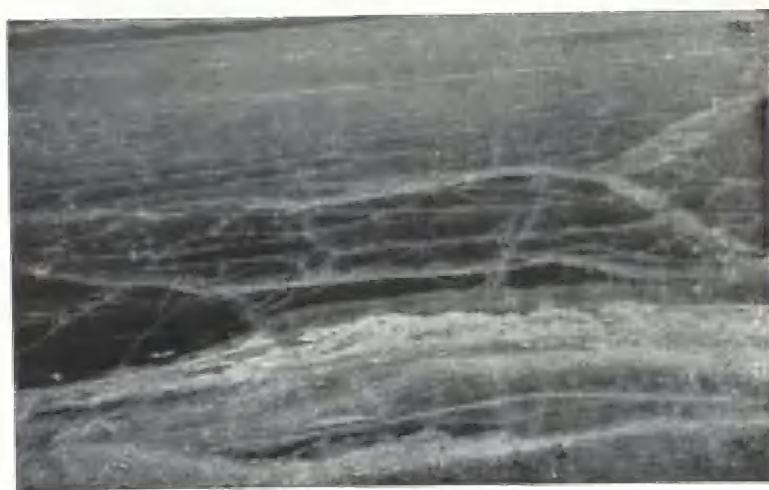
Marching beyond the Manas Lakes, the bandits plundered the goods of the Indian merchants of Johar Bhot, mostly piece-goods, ponies, and sheep worth about a lakh of rupees, between Tirthapuri and Gartok, including Tirthapuri, Guru-gem, Khyunglung, Missar, and Gartok. For two or three days they surrounded the Chhakra Mandi, but could not do anything due to the combined effort of the Indian merchants and Tibetans, who had set up a sort of temporary fortification on the top of a hill. Proceeding further the Kazakis plundered and pulled down some buildings at Gartok and Gargunsa, the summer and winter capitals of Western Tibet. Finally they entered Ladakh in the month of November or so, where the Kashmir and British forces disarmed and allowed them to pass through Kashmir to Hazara District in N. W. Frontier Province.

Due to their alliance with Russia, the British Government made arrangements for these Kazakis to settle temporarily in the village of Tarcawa and spent Rs. 2,38,000 for their maintenance between May 1942 and February 1943. Since then, the Rulers of Bhupal and Hyderabad had applied for settling them in their states, but they were finally settled down in Hazara District. These Kazakis, I was reliably informed, took an active part during the recent Kashmir riots, making a good harvest.



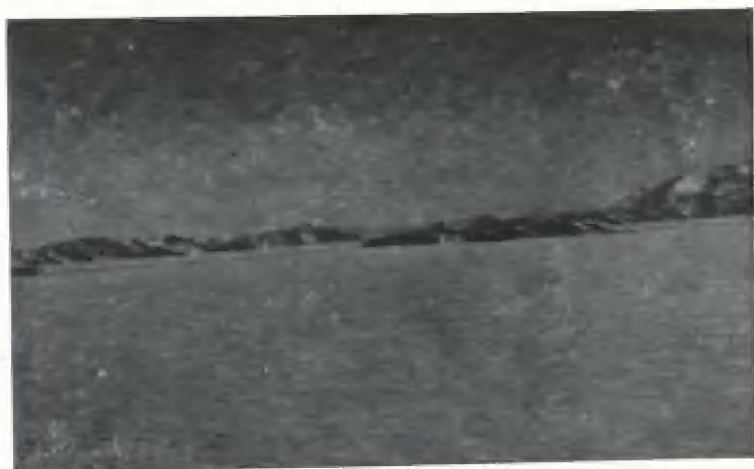
56. 'Jnan Nauka' (Metal Dinghy) on the the Holy Lake [See p. 165]





57. Fissures in Frozen Manasarovar

[See p. 41]



58. Unfissured ice of Rakshas Tal, seen from Lachato Island
towards Topserma

[See p. 43]

NEPAL AND MANASA KHANDA

Srongchen Gampo, the Emperor of Tibet, conquered the whole of Nepal, and married Bhrikuti, the daughter of Anshu Varma, the king of Nepal, in the seventh century A.D. Thus began the connection of Nepal with Tibet. Later on, several *pandits* from Nepal went to Tibet for propagating Buddhism; similarly several Tibetan monks came to India through Nepal. Even today, thousands of Tibetans go to Nepal to visit the three great *Tirthas* of Svayambhu (*Phagvashingun*), Mahabodhi (*Charung-khashur*), and Namobuddhaya (*Tamo-lujin*). In 1760 the Nepalese invaded Tibet and plundered Tashi Lhunpo but the Chinese forces pursued them up to Kathmandu and utterly routed them. In 1854 Jang Bahdur of Nepal declared war on Tibet. A large contingent of troops, under the command of his brother Dhir Shamsher, entered Purang and seized Suna Gompa and forced a treaty on Tibetans by which Tibet had to pay to Nepal an annual tribute of 10,000 Nepali *mohars* and to receive a permanent Nepalese Resident at Lhasa. Besides this, the Nepalese secured several trade facilities in Tibet. In 1929-30 a severe breach of peace was threatened between the two countries over the right of trial of a particular person but was averted in time. In contravention of some settlement between the Nepal and the Tibetan Governments, in 1947 the Zongpon of Taklakot imposed some trade tax and forced Tibetan tea at cent per cent interest on the people of Limi in the north-western part of Nepal, for non-compliance of which two respectable and well-to-do merchants of Limi were tied and handcuffed and the tax was realized and the tea was forced on them at cent

per cent interest. In 1948 some Nepalese officers were sent to Taklakot for an amicable settlement, failing which, it was said that the Nepal Government would take necessary steps to bring round the Tibetan Government and the officers concerned to come to the right understanding.

BHUTANESE POSSESSIONS

About 300 (?) years back one famous Bhutanese Lama by name Ngava-Namgyal got the village of Tarchhen from the Tibetan Government for his stay near Kailas. Through his influence he had built Nyanri and other monasteries and gained influence over some other places later on. Tarchhen, at the foot of Kailas, Nyanri and Zuthul-phuk Monasteries of Kailas, Cherkip Gompa of Manasarovar, the villages of Dungmar, Ringung, Doh, Khochar, Gezon near Gartok, Itse Gompa, Gonphu, Gesur, Samar, and a few other places in Western Tibet, came to belong to the State of Bhutan. These places are now governed by a Bhutanese monk-officer, whose headquarters is at Tarchhen, where there is a big building owned by the Bhutan State.

DISTINGUISHED VISITORS TO MANASA KHANDA

There is a reference to Kailas (Mount Meru) in the *Vedas*, the oldest books in the world's library. It is written in the *Puranas*, that Lord Shiva and Brahma, gods of destruction and creation respectively, did penance in Manasa Khanda. Marichi, Vasishtha, and other sages did penance here for twelve years. Manasarovar is said to have been created by Brahma who, it is believed, floats in it in the form of a Royal Swan. Emperor Mandhata in *Krita-yuga* (Golden

Age), Ravana, Bhasmasura, and others in *Treta-yuga* (Silver Age) did penance to propitiate Lord Shiva. There is a reference to Kailas and Manasarovar in the great epic *Ramayana*. Rishi Dattatreya did the pilgrimage to Kailas and Manasarovar.

There are several references to Kailas and Manasarovar in the great epic *Mahabharata*, according to which about 5,050 years ago at about the beginning of the *Kali Yuga* (Iron Age) Arjuna visited and conquered this Region, in consequence of which the vassal Kings of this Region sent black and white yak-tails, best steeds, gold, brilliant gems, and other things as presents to the Emperor Yudhisthira on the occasion of *Rajasuya-Yaga* or Horse-Sacrifice. After that, Rishi Vyasa and Bhima visited Kailas once and Sri Krishna and Arjuna on another occasion. Rishis, sages, and spiritual aspirants had been visiting and sojourning in this hallowed Region from time immemorial. According to some historians the great Emperor Asoka (269 B.C.) deputed the Katyuri Raja Nandi Deva of Kumaon who invaded Western Tibet through the Unta-dhura pass and annexed it to the Indian Empire. On his return journey he visited Kailas and Manasarovar. Nandi Deva visited this Region once again in the following year. According to the copper plate inscription in the temple of Pandukeshvar¹, the Katyuri Raja Lalita Sura Deva and Deshata Deva invaded and conquered Hun-desh (Manasa Khanda of Tibet). The famous Chinese pilgrim Hiuen Tsang (A.D. 635) says that the Katyuri Kings of Kumaon ruled over Tibet (western parts) in

¹ This village is midway between Joshinath and Badrinath. The copper plate dates the 25th year of Vikrama era, i.e., about 33 B.C.

the sixth century. In the seventh century, I-Tsing and several other Chinese travellers (675-85) came to India through Manasa Khanda, to study Buddhism in the Nalanda University and to visit places of Buddhistic pilgrimage in India.

Some biographers of Jagad Guru Shree Adi Shankaracharya write that he had dropped down his body near Kailas. According to Eastern Pandits, Shankaracharya lived before the Christian era, and according to the Western scholars he lived in the 8th century A.D.

In the *Kangri Karchhak* it is written that Geva Gozangba first discovered the *parikrama*-route to Kailas and Manasarovar. Once seven sages from India visited Manasa Khanda and deposited seven loads of silver with the King of Kardung, with which the images of Khochar were made. On another occasion seven maidens from India visited the Manas and had set up seven cairns, with stones taken from India, on the south-western corner of Manasarovar at Momo-dunga. The dates of these could not be ascertained.

Some Tibetans claim that Acharya Shanta Rakshita and Guru Padmasambhava visited Manasa Khanda, but authentic evidence could not be gathered of the visits of these two and those of Hiuen Tsang and I-Tsing. In the middle of the 9th century Chinese topographers and officers visited this Region and took some notes and drew maps of the Region later.

Adinath Vrishabhadeva, the first Tirthankara of Jainism, was said to have attained *Nirvana* at Kailas (*Ashtapada*). The Lochava (Tibetan translator) Rinchen Zangbo (958-1058) visited Kailas and Manas

and sojourned for 12 years at Khochar, preaching Lord Buddha's gospel. His *gaddi* is still preserved there.

In the year 1027 Pandit Somnath of Kashmir visited this Region and translated the *Kalachakra Jyotisha* into Tibetan (see p. 93). Pandit Lakshmikara and Danashree Chandra Rahula also accompanied him.

In the 11th century, the great Tibetan mystic and poet, *Siddha* Milarepa¹ sojourned in this Region for several years, doing his penance remaining completely naked. He wrote over a lakh of verses in Tibetan, which have all been printed along with his biography. *Kailas Purana* gives a good account of his miracles in connection with his contest with the heretic lama Naropenchhung. There are several places on Kailas-*parikrama* associated with this saint. Lama Marpa—Milarepa's Guru, and Tilopa—Milarepa's great grand-guru visited Kailas and Manasarovar, and the latter sojourned for some time at Cherkip.

On the invitation of the King Chang-chhup-o of Guge (Western Tibet), the great Acharya Deepankara Shreejnana, popularly known as Atisha (982-1054), the Rector of the Vikramashila University, went to Thuling, in 1042 at the age of 61, for preaching Buddhism, stayed there for nine months, and wrote several books in Tibetan. It is said that he got the monastery of Chhabrang constructed in 7 days. In 1044 he visited

¹ According to the Tibetans, *Tantrik* cult started from Dorje-chhang. Tilopa was the first *Tantrik* teacher and hails from Bengal. Naropa is his disciple (1040) and is a Kashmiri pandit. Lama Marpa is his Tibetan disciple and is a married monk. His disciple is the great yogi, *Siddha* Jechun Milarepa (1038-1112). He is a full-fledged monk and his disciples are Thakpo-Lhanjir and Rechung. His followers are called *Kargyudpa*, which sect is still prevailing in Tibet.

Kailas-Manas and spent a week in a cave on the shores of the Lake below the present Gossul Gompa. There are his footprints and a spring at Gejin. He stayed for one rainy season in Khocharnath. One of his Tibetan disciples who was with him till his last days, wrote an elaborate biography of the great Acharya. He died at the age of 83 and his skeleton and drinking vessel are, to this day, preserved in the temple of Dolma in Nythang Gompa. Lama Jigden-gombo, the first abbot of Dekung Gompa, with 13,000 disciples visited Kailas in the year 2057 of Buddha Era (A.D. 1513?). He visited Kardung and Khochar also. At the time of his visit there were many scholars and *Bhikshus* in the Purang valley.

Ra Lochava was in this Region for 21 years and had got constructed 108 image-halls at Thuling, Purang, Khochar, Limi, Shar, Piti, and other places. He got the faces of the image of the Khochar Gompa gilded. Some of the frescos in Khochar Gompa are said to have been executed by him. His time could not be ascertained. In 1553, the Khan of Yarkand sent his General, Mirza Haidar, with a big army to raze to the ground the idol-temples in Lhasa. "The army made havoc in the country like plague but was itself decimated and did not attain its desired object". On the return journey Haider halted for the night on the shores of the Lake.

It is said that the Moghul Emperor Akbar the Great had sent a party in the middle of the 16th century to discover the source of the Ganges. The party went round the Manas and prepared a map in which was shown Sutlej and Brahmaputra coming out of Manasarovar and Sarajn coming out of Rakshas Tal.

In 1625-26 the Portugese Jesuit Father Antonio de Andrade went to Chhabrang by the Mana pass and laid the foundation of a Christian Church in April, 1626. In 1627 four more Jesuits went here but there are no traces of the church now.

Some say that Gosain Tulsidas, the author of *Rama-Charitamāṇa*, visited Kailas and Manasarovar, but it is very doubtful. He describes Lord Shiva and Parvati as sitting under a huge banyan tree near Kailas Peak.

Raja Bajbahadurchand of Chand Dynasty ruled over Kumaon (with Almora as capital) between 1638 and 1678. Having heard of the atrocities committed by the Huniyas (Tibetans) on the pilgrims to Kailas and Manasarovar he invaded this Region. He entered Tibet by Unta-dhura pass and visited Kailas and Manasarovar. On the return journey he had besieged the fort at Taklakot, took control of all the passes leading to this Region, and stopped all the taxes which the Indian Bhotia traders used to pay to the Tibetans. Later, on an assurance being given by the Tibetans that they would not molest either the pilgrims or the traders in future, he ordered the taxes to be paid to the Tibetans as usual. On his return from Kailas the Raja had founded a *Sadrarta*, in 1673 to distribute food and clothing free to the pilgrims to Kailas and Manasarovar, for which he had set apart the revenue of five villages by a deed engraved on a copper plate.

The fifth Tashi Lama Penchhen Lobsang Chhoki Gyalchhen came on a pilgrimage to Manasa Khanda in the 17th century. It is said of him that he threw a *khatak* from Thugolho to the Lake-god residing on the

tree in the centre of the Lake. The *khatak* appeared to have remained suspended in air to ordinary persons, for it was actually hanging on the branches of the holy tree which could be seen only by the pious few. On his return he had gilded the top of a temple at Tashi Lhunpo with a handful of *chema-nenga* (see p. 74) taken from the shores of the Manas. Some say that the Lama visited the Manas in the 19th century.

In 1715, the Roman Catholic Father Desideri and Freyre travelled from Leh to Lhasa in the company of a Tartar Princess and her big retinue. They reached Manasarovar on November 9, 1715. Desideri and Freyre are the first white men to visit Manasarovar. Desideri describes the Ganges as taking rise in Kailas and Manasarovar and confuses it with the Sutlej and further says that Kailas is the source of the Indus.

Between 1711 and 1717, the Chinese Emperor Kang Hi deputed some lama-topographers to survey and reconnoitre this Region. They had later prepared a map of Tibet including this Region. About the year 1758, Khembo Sonam Gelzin of Ngor or Ngyur Gompa visited Kailas-Manas Region and wrote the *Khochar Karchhak* or *Khochar Purana*.

Purangir, a Brahmin, employed by Lord Warren Hastings as an interpreter and a spy and who accompanied Bogle¹ and Turner to Tibet, visited Manasarovar about the year 1770 and stayed for a day at Thugolho. He reports that the Ganges has its source on Kailas and from there it flows into Manasarovar and from the Manas it flows out again. Between 1770-80 Puranpuri an *urdhva-bahu sanyasi* (a monk with hands upheld), visited Balkh, Bukhara, Samarkand, China, Lhasa,

¹ Bogle is the first Englishman to enter Tibet.



59. Embankments of Smaller pieces of Ice, resembling Glasspanes [See p 46



60. Manasarovar Frozen, with Fissures and Regular Blocks of Ice piled up into Embankments due to Coastal Explosions [See p 46



61. Irregular Blocks of Ice

[See p. 46



62. A Pool of Water in the Frozen Mannsarovar with a Flock of
Brahminy Ducks

[See p. 47

and other places and then did the *parikrama* of the Manas in six days. He says that the Ganges issues out of Kailas, Saraju from Rakshas Tal, and Brahmaputra from the Manas.

In 1812, William Moorcroft, a veterinary surgeon and Captain Hearsay, in the guise of *sadhus* entered Tibet by Niti pass. On August 6, they camped near Chiu Gompa. At that time there was no flow of water in the Ganga Chhu. But Harballabh, who accompanied them, visited the Manas previously in 1796, when, there was so much of water in the Ganga Chhu that he could not wade through it but crossed it by bridge near the hot springs. It is said that Moorcroft was killed near Manasarovar in 1838. One Debu or Deb Singh of Johar who was a *Patwari* for 24 years, helped Moorcroft a good deal in his wanderings in Nagri. Moorcroft and Hearsay are the first Englishmen to visit Manasarovar. In the year 1841 General Zoravar Singh invaded Western Tibet and reached Taklakot where he was assassinated by Tibetans. His tomb still stands at Toyo.

In September and October 1846, Captain Henry Strachey visited this Region by Darma pass. He went down the Darma-yanti, travelled to Rakshas Tal, then to Chiu Gompa, and returned by the Lipu Lekh pass. He saw three feet deep water rapidly flowing in the Ganga Chhu and suggested for the first time whether the Darma-yanki might not be the main head-stream of the Sutlej, from the quantity of water it carried. In 1848, his brother Sir Richard Strachey along with J. E. Winterbottom, visited this Region via Milam and Gyanima Mandi and travelled on the southern shores of Rakshas Tal up to Chiu Gompa. He returned via

Sibehilim and Milam. The Strachey brothers contributed a good deal toward the geography of Manasa Khanda.

The famous *Siddha* Tailanga Swami of Behares is said to have visited Kailas-Manas for a number of times about the middle of the 19th century. His original name was Ganesh Swami and hailed from Vizagapatam. Being a Telugu brahmin he was popularly known as Tailanga Swami. He died in the year 1887 at a ripe age of 150 but many believe that his age was 280 at the time of his death.

In 1845, the Nepalese invaded Manasa Khanda and destroyed the fort of Siddi-khar. In July, 1855, Adolf and Robert Schlagintweit proceeded up to Daba via Milam but were turned back. Again in the month of September they went to Thuling by Mana pass and Chhabrang, but were again turned back; so they could not do any exploration work. Sherring writes in his 'Western Tibet' that in 1855 or 1860 one Drummond, Commissioner of Bareilly sailed on Manasarovar but it could not be confirmed either from Alnora or from Manasarovar Region. In 1864, Robert Drummond, Henry Hodgson, Lt. Col. Smith, and Webber went to the southern flank of Gurla Mandhata and proceeded up to the source of the Brahmaputra for hunting the wild yak. Webber places the source of the Ganges on the southern flank of the Mandhata and that of the Indus on the northern flank.

In June, 1865, Captain H. R. Smith, together with A. S. Harrison, went to Tarchhen via Lipu Lekh. They went along the northern shores of the Rakshas and Mapas, stayed for a day near Cherkip Gompa, and then proceeded to Gartok. The same year in the

month of August Adrain Bennett visited Daba by Chor-Hoti pass. He stayed there for a month and returned back by the Niti pass as he was not allowed to proceed further.

Deputed by the Survey of India Office in 1856 through Captain T. G. Montgomery one Johari Bhotia Thakur Nain Singh, C.I.E. visited Manasarovar. From his records a map of Manasarovar and Rakshas Tal was prepared. Though he did not actually visit the source of the Brahmaputra, yet the information he had gathered from local Tibetans was quite right. He writes that "the source of the Brahmaputra is in the Tamchok Khambab Kangri glaciers at the head of the river Chema-yungdung". He is called 'Pundit A.' in the Survey of India records.

Between 1867-68, Montgomery sent some more pundits for survey, of whom some were murdered before reaching the source of the Indus. Almost at the same time as Nain Singh, the Survey of India had sent Man Singh, son of Dev Singh a Johari Bhotia, for exploring the regions north of Kailas, but Man Singh being very well known in Manasa Khanda, Tibetans did not allow him to go beyond Kailas.

Between 1879 and 1882, a Johari Bhotia, Rai Bahadur Kishen Singh was sent to Tibet by the Survey of India Office to do some survey work. Most of his exploration work was done in Mongolia. On his way back home he visited Manas Region also. His explorations and maps are published by the Survey of India Office and he is known as 'A. K. Pundit'.

In 1900-03, the Japanese Buddhist Monk, Ekai Kawaguchi, travelled in Tibet and visited Manas Khanda in the year 1900, crossed the Brahmaputra

(Chema-yungdung), and "drank deep the water at the source of the Ganges from the spring Chhumik-thungtol," about 20 miles east of Manasarovar. He passed by Thugolho on his way to Gyanima Mandi and then did the round of Kailas and went to Lhasa. He makes the Sutlej a tributary of the Ganges and says that he found Rakshas Tal to be at a higher level than the Manas, that every ten years water from Rakshas Tal flows into the Manas and that the circumference of Manasarovar is 200 miles !

At the end of November 1904, Major C. H. D. Ryder, and Captain Rawling, marched along the shores of both the lakes and found no water in Ganga Chhu. Though he did not actually visit the place, Major Ryder makes the Chema-yungdung the main river of Brahmaputra and Kubi a tributary, from the information he had gathered from the local Tibetans. In 1905, Charles Sherring, Deputy Commissioner of Almora, and Dr. T. G. Longstaff visited Kailas and Manasarovar by the Lipu Lekh pass, proceeded to Gartok, and returned by Unta-dhura pass. Dr. Longstaff attempted to climb the Gurla Mandhata, when he was almost to reach the summit, a dangerous avalanche came down; and so he had to come back. However, it was a successful climb. In 1907 or 1908, Mr. Cassel visited Gyanima Mandi as a special officer or most probably in the capacity of British Trade Agent of Western Tibet.

In 1907-08, the Swedish explorer Dr. Sven Hedin, had travelled for two long years and did a good deal of exploration work. He started the journey from Srinagar-Kashmir, passed through Ladakh, went as far as Shigartse, the place of Tashi Lama, spent over two months on the Holy Manasarovar, sailed on the Lake

in a canvas boat, took several soundings, prepared an isobathic map of Manasarovar, and sounded the lake Rakshas Tal partly. He is the first whiteman who sounded the Lakes Manas and Rakshas and rounded the Manas, the Rakshas, and the Kailas. It is he who had fully enjoyed the beauty of the twin Lakes. The description of his voyages on the Manasarovar is most thrilling, fascinating, and romantic. He finally fixed the sources of the Brahmaputra, the Indus, and the Sutlej and claimed to be the 'first European and whiteman' who had discovered them. These findings were finally carried by the Survey of India Office, until they were seriously questioned and challenged by me as being defective and full of discrepancies, the authenticity of which is for the future explorer and geographer to judge. But this is a minor affair. However, Sven Hedin can safely be said to have contributed the greatest share towards the geography of Tibet and filled up several blank spots on it. He is at once a born explorer, geographer, and an adventurer. His two monumental works are the popular 'Trans-Himalaya' in three volumes with hundreds of illustrations and several maps and the more scientific work the 'Southern Tibet' in twelve volumes including two volumes of maps. Besides these he had written some ten more books incorporating his explorations and discoveries in Central Asia and other lands.

In 1908, Sri Hansa Swami of Bombay went to Kailas by Lipu Lekh pass. He stayed for twelve days on the shores of the Manas and later wrote a book on Kailas in Marathi, which was rendered into English by his disciple Purohit Swami under the name 'Holy

Mountain'. He narrates many interesting things in it—that he saw Dattatreya in physical form on Gourikund, that by his grace he could negotiate a distance in fifteen minutes on his return journey which he previously did in 15 hours on the onward journey, and so on. One *sadhu* by name Mayura-pankhi Baba visited Kailas several times and lived at Khochar in 1912-13. In 1913, he made arrangements to live for a year in Gengta Gompa but died in February 1914 due to severe cold. In 1915, Shree Swami Satyadeva Parivrajaka visited Kailas and Manas. He went there via Milam and Unta-dhura pass and returned by Lipu Lekh pass. He wrote a book on Kailas which may be the first book in Hindi.

In 1924, the author's Master Shree 1108 Swami Jnananandaji Maharaj visited Kailas and Manasarovar by Mana pass and returned by Hoti pass. He did the whole journey wearing only a *kaupen* (a loin-cloth).

In 1922, Rai Bahadur S. R. Kashyap of Lahore visited Kailas and Manas via Lipu Lekh pass and returned via Puling and Mana pass. Again in 1926, he visited these places by Lipu Lekh pass and returned via Milam. He did the round of Kailas but not of the Manas. He wrote an article 'Some Geographical Observations in Western Tibet'. There was nothing fresh in it excepting that he says that the length of the Ganga Chhu is 3 miles, which in fact is nearly six miles.

In 1926, Hugh Rutledge, the Deputy Commissioner of Almora and Captain Wilson visited Kailas by Lipu Lekh pass. He did the round of Kailas and found no water in the Ganga Chhu. In 1927, Shree Swami Jayendrapuriji Mandaleshvar, Benares, with a party of 25 *Mahatmas* visited Kailas and Manas by Mana pass

and returned by Lipu Lekh pass. He is the first Mandaleshvar to visit this Region. A pandit of his party wrote a book in Hindi '*Shree Kailasa Marga Pradipika*' in which he says that there are blue lotuses in Manasarovar and that excepting on a few days there would be snowfall without clouds. In 1929, Shree Swami Tapovanji (Kerala), and Shree Swami Krishna-shramji of Gangotri visited Kailas and Manasarovar from Gangotri.

In 1929, E. B. Wakefield, Assistant Political Agent, Gangtok (or the Acting B. T. A.) visited this Region and found the Ganga Chhu deep and fast flowing. In 1931, His Highness Krishna Raja Wadayar Bahadur, Maharaja of Mysore, visited Kailas. Shree Swami Sivanandaji, Shree Swami Advaitanandaji and Shree-mati Suratkumari Devi, Rani of Singhai, also visited Kailas the same year. The Rani was the first pilgrim to travel on a *dandy* to Kailas.

Shree Ansingh Baba of Almora visited Kailas twice or thrice before 1930. In 1930-31, he sojourned at Khochar and during the winter of 1931 he stayed partly at Gengta and partly at Tarchhen. He used to live on potatoes and buck-wheat. In 1932, he became very weak and mad and died in a very bad condition at Taklakot in the month of July. It is about this Baba that one Swami of Rishikesh wrote that he lived on water and leaves only and yet he was stout and sturdy. It is such incorrect reports that create sensation and curiosity amongst credulous people.

In 1932, F. Williamson, Political Agent, and F. Ludlow visited Kailas and Manasarovar, went to Gartok and returned via Simla. In 1933 or 1934, Shree Swami Krishnamachari, while on his way to Kailas was

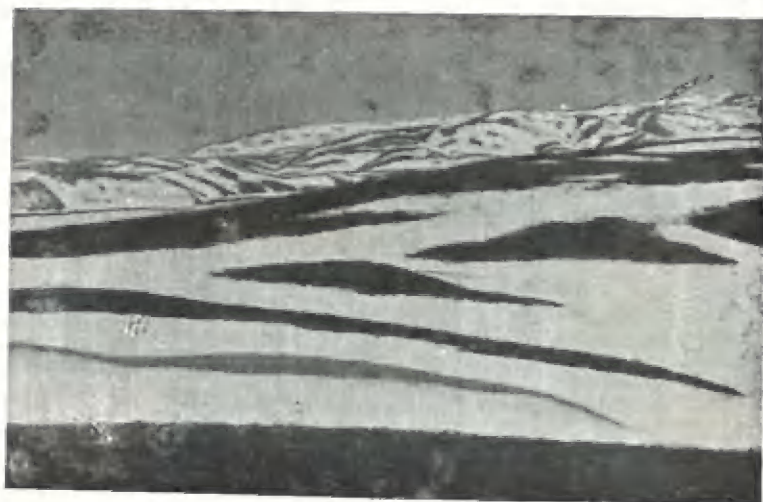
murdered" by dacoits, two days before reaching the destination, since he resisted in parting with the money in his possession.

In 1934, Shree Umaprasad Mookerjee, M.A., B.L., brother of Dr. Syamaprasad Mookerjee of Calcutta, visited Kailas and Manasarovar and took a cine-film of his trip, which would run for about half an hour, a copy of which was presented to the University of Calcutta for public use.

In 1935, the Italian Orientalist Prof. Guiseppe Tucci visited this Region by Lipu Lekh pass and returned via Gartok and Ladakh. He is the second white man who did the round of Kailas and Manasarovar both, after Seven Hedin. He has edited and published some rare Sanskrit works which had been missing from India.

In 1936, Arnold Heim and August Gansser, two Swiss Geologists visited several places in the Central Himalayas for doing some geological survey. On three occasions the latter entered Manasa Khanda without a passport and collected a good deal of geological data. On the first occasion he filtered into Siddi-khar from Nepal. Later he entered Tibet by Mangshang pass, did the round of Kailas, and returned by the same pass with his geological collection carried on sheep, as I did once in 1928. While at the north-western corner of Rakshas lake he writes " broad fathomless bogs compel a wide detour. Here must once have been the outlet of the great lakes. Now the rivers flow in the opposite direction " ¹ and nothing more. Perhaps he was not much interested with the geographical aspect of the Sutlej-problem. On the third occasion

¹ Arnold Heim and August Gansser, ' The Throne of the Gods ', p. 97



63. Zebra-like Deposits of Snow on the Southern Shores
of Rakshas Tal [See p. 44]



64. The Island Topserma [See p. 26]





65. The Island Lachato

[See p. 25]

he entered Tibet by Balcha-dhura, went as far as the Sutlej, and returned by the Kungri-bingri pass. They wrote a popular work by name "The Throne of the Gods" in German, later translated into English. In the same year a young Austrian Geologist Herbert Tischy smuggled himself into this Region in the guise of a *sadhu*. He wrote a book 'The Holiest Mountain' incorporating his experiences.

In 1936-37, Shree Brahmachari Omsatyam sojourned at Tirthapuri for a year. At the end of 1937 or early in January, 1938, while trying to do the round of Manasarovar, he was drowned in Gugta,¹ the ice under his feet having given way.

In 1937, a batch of Gujrati ladies, devotees of Shree Narayana Swamiji of Khela, did a complete round of Kailas and Manas both. Barring the Bhotias, this is the first batch of Indian ladies who had done the round of both these *tirthas*. In 1938, Shreemati Anandamayiji visited this Region.

In 1940, Shreemati Uma Dar and Shree M. B. L. Dar (now Secretary to Government, U. P., Local Self-Government Department) and Shreemati Rukmini and Shree G. Dikshit (now Deputy Engineer-in-Chief, E. I. Ry.) did the round of Kailas and Manas both and returned to Taklakot in nine days. This is the second batch of ladies who did the round of Kailas and Manasarovar.

From 1935 to 1941, Shree Narayana Swamiji of Shree Narayana Ashrama of Khela visited Kailas and Manasarovar successively for seven years, with blg

¹ Gugta is the outlet of Ding too into the Manas on its north-eastern corner.

batches of his followers and devotees. He is much interested in this Region and is having a 'Manasa Vishramashala' constructed on the shores of Manasarovar.

In 1941, Shree Swami Kaivalyanandaji of the S. P. League, Calcutta, and Mr. R. D. Balvally, now Deputy Accountant General, Central Revenue, Delhi, with some of their friends, visited the Region by Lipu Lekh pass and did the complete pilgrimage by visiting Khocharnath and Tirthapuri and by doing the complete rounds of Kailas and Manasarovar, which very few people could do so far.

Between 1930-42, one Ladaki Lama sojourned near Silung Gompa on the southern slopes of Kailas for spiritual practices. He died in 1942. In 1942, Captain R. K. M. Sekar, B. T. A. of Gyantse, came on special duty to Western Tibet via Ladakh and Gartok, did the round of Kailas, and returned by Lipu Lekh pass. As a result of his visit the headquarters of the Trade Agency of Western Tibet has been transferred from Simla to Gangtok. In 1931 and 1942, an American Christian Missionary by name Mr. Steiner, visited Kailas and Manasarovar on mission propaganda work and did the round of both Kailas and Manasarovar.

During 1943 and 1944, Shree Kailas Sarana, a Lingayat from Karnatak, did 100 rounds of Kailas and 12 of Manas, a great feat indeed. There are some Tibetans who undertook such a hard task, but it is spread over several years.

In 1944, Shree T. N. Krishnaswami of Dalal & Co., Madras, with his assistant Shree Kalyanasundaram, visited Kailas and Manasarovar and did the round of

both. This is the first batch of pilgrims from Tamilnad who did the round of both Kailas and Manasarovar. In 1945, Mr. Salim Ali, the well-known Indian Ornithologist of Bombay, was on an ornithological pilgrimage to Kailas-Manasarovar Region, and published the report of his exploration in August 1946. In 1945, Major T. S. Blackney of Coimbatore visited Kailas and Manas but could not do the rounds due to limitations of the passport. The same year Shreemati Lopamudra and another lady from Guntur visited Kailas and Manasarovar. This is the first batch of ladies from Andhra Desa to visit this Region.

In 1947, Shree Kanwal Krishna, the well-known Indian artist, visited this Region, collected good many banners and other curios and made several paintings both in water-colours and oils. He started from Simla, went to Gartok and returned by Lipu Lekh pass. From 1937 to 1948, Shree Brahmachari Bhaskarji of Ahmedabad had been a regular visitor to this Region and did a round of Manasarovar also. He intends settling down in an *Ashrama* which he proposes to construct near about Didhat on Almora-Kailas route. Shree Swami Vidyananda Saraswatiji of the Gita Satsang Ashram, has been visiting this Region for the last five years.

The last consignment of the last mortal remains (ashes) of the Father of the Indian Nation—Mahatma Gandhi—was immersed in the sacred deep blues of the Celestial Lake Manasarovar, on August 8, 1948, by a party of his intimate associates headed by Shree Surendra. May peace be unto the departed soul! The Gandhi Memorial Committee propose to erect a fitting


memorial at a suitable place on the shores of Manasarovar.

Shree Buddha Bose of Calcutta, the well-known Yoga-Asanist, visited Kailas and Manasarovar by Niti-Hoti pass in 1940 and returned by Lipu Lekh pass. He visited this Region a second time by the same route in July-August 1948 and took a very interesting technicolour cine-film which runs for about two hours. He again visited this Region in October-November and took some more cine-film to supplement the first consignment.

I visited Kailas in 1928, for the first time, from Srinagar and returned by Niti pass. Again from 1935 onwards I have been regularly visiting this Region every year by various routes and staying on the shores of the Holy Lake Manas from two to six months. In all I did 23 rounds of Kailas and 25 of Manasarovar; sojourned at Thugolho, on the southern shores of the Lake, once for a twelve-month during 1936-37 and on another occasion for a sixteen-month during 1943-44. I discovered the sources of the Four Great Rivers of this Region from all points of view, namely tradition, quantity of water, length, and glacier. I negotiated four new passes—Topchhen la, Lhe la, Charok-phurdod la, and Khando-sanglam la—; reached the northern, southern, and eastern bases of the Kailas Peak; ascertained the number of islands in the Rakshas lake; discovered the Tso Kapala; studied the Lakes cursorily when they were frozen in winter; sounded Gouri-kund and Manasarovar; collected some fossils; and undertook some other minor expeditions to the 'Deserted Cave-City' and other places. I visited this Region primarily for the prosecution of my spiritual practices but during leisure hours or as a recreation after

serious work, I took to some work of scientific interest like exploration ; and as such, the readers should not be surprised if my findings or writings fall short of the standard of a professional and fullfledged scientist, in view of the fact that I had absolutely no regular training whatsoever in any of the branches of the subjects I touched, nor had I any expeditional equipment or kit.

'JANMA-BHOOMI' AND 'JNAN NAUKA' ON THE MANAS

Before concluding my trips to the Holy Lake I wish to locate definitely the thermal springs situated in the bed of Manasarovar and reach the centre of the Lake, which is considered by the Tibetans to be inaccessible and which has not been reached by any one up till now. To achieve this I took to Almora in 1942, the 'Jnan Nauka'—galvanized steel sailing dinghy-cum-motor boat—presented to me by His Highness Maharajashree Sir Krishna Kumar Sinha, K.C.S.I., Maharaja Sahib of Bhavnagar, which was lying there up to the middle of 1947, for want of official sympathy to secure transport and for want of funds. With the munificent donation of Shree Amritlal D. Sheth of 'Janma-Bhoomi', Bombay, and with the co-operation of the Congress ministry of U. P. I could transport the boat to Manasarovar in August 1947. It was at last launched in the Holy Lake on August 17. With the  and Tri-coloured Chakra and Charkha flags proudly fluttering side by side on the deck, the 'Jnana Nauka' rushed into the turquoise-blues of the celebrated celestial Lake amidst deafening cheers of pilgrims, Tibetans, and Bhotia traders. A few soundings were formally

taken. In 1948 and 1949, the U. P. Government made a special grant to defray the cost of the outboard motor to complete the exploration work on Manasarovar. After completing the work the boat would be left on Manasarovar under the care of the Darma Seva Sangha for the benefit of future pilgrims and tourists.

In 1946, I took the 'Janma-Bhoomi', a three-seater light rubber boat presented to me by Shree Amritlal D. Sheth of Bombay. I launched it in Manasarovar and sounded the lake Gouri-kund.

BENEFITS OF A MOUNTAIN TRIP

Mountain-journey would certainly reduce the unnecessary fat of the bulky people and make them healthier and smarter and look better. One is cured of several minor ailments dormant in the body; there is an influx of new blood into the system; nervous system gets toned up and endocrine glands get more invigorated; digestion is improved and appetite sharpened; heart and lungs are strengthened; brain is refreshed and mind becomes tranquil, and one feels rejuvenated. By the time one returns from mountains one feels that a new life has come into the body and becomes fit to do one's work with double vigour and efficiency. So, young men in general and busy workers of all walks of life in particular should make it a point, in consideration of their health and even in consideration of better out-turn of work which they have been doing, to go on a holiday trip once in a year, for a month or more into mountains, forgetting time and space and leaving their watch and office-brain at home. When once they do this, they will realise how profitable it is even from a business point of view to go

on a holiday for a trot into mountains and feel why they had not done it earlier.

SOME REFLECTIONS

Aeroplanes can very easily descend on the plains at Parkha, on the north of Manasarovar, near Gyanima, Chhakra, or as a matter of fact anywhere in Tibet without spending much for the construction of a runway or an aerodrome. Sea-planes can conveniently descend into the Manas, the Rakshas, or any other lake. Attempts are being made to move the Government of India to induce the Tibetan Government to permit the pilgrim-planes to go to Kailas-Manas Region. When this is achieved, a sea-plane can very easily be chartered.

An air-field is being constructed at Badrinath, which is an hour's journey from Hardwar. So it is very likely that arrangements for an aerial route to Kailas and Manasarovar also would be made soon for the air-minded. This would be very advantageous to those who cannot afford time and undergo the hardships of the long journey to these places. But this would in no way deter those pilgrims and tourists who love adventure and mountain-trotting, from undertaking the journey by foot or by pony.

We do not wish that the tranquillity and sanctity of this Region should be disturbed in any way, but it would be no wonder if in near future, some enterprising concern starts a 'Kailas-Manasarovar Air Service' and begins taking pilgrims and tourists to this Region in such an amazingly short time that one could return back home the same day after having a dip in the Holy Lake ! I very much wish that the young men of this

Ancient Land take living interest for going to the Himalayas and be benefited both physically and spiritually.

The possibilities of an expedition to reach the top of the Kailas Peak—if and when such a venture be allowed by the conservative, superstitious, and suspicious Tibetans—can be investigated and surveyed from the eastern side only, since on the remaining three sides the Peak rises almost perpendicularly and avalanches slide down headlong.

It is a matter of pity to note that the Indian Universities and the Indian youth of today are not taking any living interest for leading expeditions to the Himalayas, either for mountaineering, exploration, for trotting, or even for a pleasure trip ; whereas it has been reserved for the foreigner to reach the top of the Kamet or the Nanda Devi, or to sound the Lake Manas, or to discover the source of the Brahmaputra. This was not the case in the Ancient Aryavarta.

At a time when people of other countries used to dread the mountain and the forest and when they had not learnt to appreciate and enjoy the beauty of nature and mountain grandeur, thousands of years back, our ancestors had explored the most inaccessible mountains, forests, and regions in the Himalayas ; they had gone to every nook and corner of these snow ranges and used to hold unspoken talks with Nature ; they had discovered the best view-points and panoramas and enjoyed their beauty in all nakedness and bequeathed them to us, as legacy, by way of places of pilgrimage. The very fact that the most inaccessible mountains, rivers, streams, brooks, springs, passes, and places have been stamped with names is a proof of



66. The Breeding Ground of *Ngangba* on the Lachato with
Mandhata in the background [See p. 25]



67. Lachato with Kailas in the background [See pp. 23, 25]



68 Rakhas Tal with high Oceanic Waves on one side,
Mandhata in the background [See p. 25]



69. Rakhas Tal Frozen into ice on another side, Kailas
Mirroring in it [See p. 23]

this statement. In one word, their very life-blood—their best writings, both spiritual and secular, Vedas, Upanishads, Epics, Poetry, Art, Astronomy, Medicine, etc.,—was all inspired by these hoary mountains. Even in the later period of Indian history, the Great Shankaracharya had established one of his monasteries at Joshimath near Badrinath in the heart of the Himalayas. In the eighth and tenth centuries Acharya Shantarakshita and Deepankara Shreejnana crossed the invulnerable Himalayas from one side to the other, went to Tibet, and travelled from one end of the country to the other to preach the gospel of Buddha even at the ripe age of one hundred years.

I cannot resist the temptation of reproducing once again the lines of Burrard and Hayden, "Manasarowar was the first lake known to geography. Lake Manasarowar is famous in Hindu mythology ; it had in fact become famous many centuries before the lake of Geneva had aroused any feeling of admiration in civilized man. Before the dawn of history Manasarowar had become the sacred lake and such it has remained for four millennium."

What is the state of affairs now in this very country where our ancestors showed so much of interest and enthusiasm in the past in the Himalayas? What a deplorable condition ! Modern India is not wanting in men or money ; there are thousands of educated youths with finer tastes and scientific attitude, but unfortunately they always complain of political bondage ; whereas in foreign lands people have not stopped exploration work even when the whole world was engaged in dreadful wars. In Switzerland and other countries there are regular schools and seasonal

training courses in mountaineering, skating, skiing and allied subjects. Even the general public, men, women, young and old, and children, undergo training in these subjects and go on a holiday trip for mountain-excursions even during winters. Readers need not be surprised at this, my side-treking from the main subject; one often enjoys a side-treking in the Himalayan travels.

In my opinion our young men are wanting in enthusiasm for mountaineering and adventure, for which the modern Universities are mainly responsible. So the Universities should now encourage and inspire students and finance them by sending batches of them to the Himalayas in the beginning, on educational and health tours. When once it is started, I am sure that wonderful progress will be made in this direction in the course of a decade. "The Himalayan germ once caught works inside like a relapsing fever; it is ever biding its time before breaking out again with increased virulence."¹ "Once a man has found the road in the Himalayas, he can never keep away for long."² The Geography Departments of Universities should evince special interest in this regard and invite foreign mountaineering experts for training their students. This work is long overdue and should be immediately taken up both by the Indian Universities and the Government in right earnest.

REACTIONS OF KAILAS-MANAS ON WESTERN MINDS

It will not be out of place if a few lines are quoted here from the 'Trans-Himalaya' by Dr. Sven Hedin,

¹ Marco Pallis, 'Peaks and Lamas'.

² Dr. T. G. Longstaffe.

giving the reactions of these two Holy places on his mind.

"The stranger also approaches Kang-rimpoche with a feeling of awe. It is incomparably the most famous mountain in the world. Mount Everest and Mount Blanc cannot vie with it.

"Manasarovar is the abode of sanctity and of peace.....No language on earth contains words forcible enough to describe the view from it over the lake.....I, too, was the victim of an illusion which almost made me catch at the parapet for support. I wondered whether it was a fit of giddiness.....A dream-picture in the most ethereal transitory tones floats before us. We seem to stand on a promontory jetting out into space which yawns around us and in front.....I should have liked to remain a while under its enchantment.....I enjoy the voyage to the full, for nothing I remember in my long wanderings in Asia, can compare with the overpowering beauty of this nocturnal sail.....Two flocks of geese are swimming on the water producing diverging ripples. All is so indescribably quiet so ethereal, transparent and transitory, so subtle and sensitive, that I scarcely dare breathe. Never has a church service, a wedding march, a hymn of victory, or a funeral made a more powerful impression on me.....Wonderful, attractive, enchanting Lake! Theme of story and legend, playground of storms and changes of colour, apple of the eye of gods and men, goal of weary, yearning pilgrims, holiest of the holiest of the lakes, art thou, Tso-mavang, lake of all lakes. Navel of old Asia, where four of the most famous rivers of the world, the Brahmaputra, the Indus, the Sutlej, and the Ganges, rise among gigantic peaks.....Mana-

sarovar is the pearl of all lakes in the world. Hoary with age when the books of the *Veda* were written..... Oh! what a wonderful lake it was! I have no words to describe it. To my dying day I shall never forget it, and even now is in my mind as a legend, a poem and a song. Nothing that I can recall through all my wanderings can compare with the overwhelming beauty of this night journey. It was like listening to the silent and mighty throbs of the heart of Nature.....It seemed as though the landscape, everchanging as the hours creep slowly by, were unreal; as though it no longer belonged to this earth, but lay on the borders of the world beyond, nearer to Heaven, the region of dreams and phantasies, of hopes and longings, a mysterious fairy land, rather than to this earth of men and sinners, of worldliness and vanity.....I threw a farewell glance at Tso-mavang, and experienced a feeling of bereavement at the thought that I must now leave its shores."

August Gansser writes, "The fundamental idea of Asiatic Religions is embodied in one of the most significant temples I had ever seen, a sun-lit rock and ice! Its remarkable structure and peculiar harmony of its shape, justify my speaking of Kailas as the most sacred mountain in the world.....the holiest mountain in the world and the Sublime Throne of the Gods."¹

"The unrivalled position of this unique mountain of the shape of Shiva's lingam has made it the holiest throne of the gods of the great Asiatic religions.....The Kailas, not only is the holiest mountain for several hundred million Buddhists and Hindus, but is also

¹ Arnold Heim and A. Gansser, "The Throne of the Gods".

geologically a unique feature. It seems to represent the highest tertiary conglomeratic series of our globe, still in the position of deposition."¹

LET US TO THE DIVINE LAKE

Return journey should be done, taking proper rest wherever needed, following the route of the onward journey. As this pilgrimage cannot be undertaken easily, or often, one should spend some days leisurely in quiet meditation, either at Kailas or preferably on the shores of Manasarovar, wherefrom one can enjoy the view of the Holy Kailas and a sacred dip in the Manas. Whether one be a pilgrim or a tourist, one should not fail to derive full benefit from these holy and hallowed places by staying there at least for a few days, and not run on in undue haste. Pilgrims should make it a point to devote some time daily for peaceful meditation and contemplation by the side of the azure-blue surface of the charming Lake. Forgetting the idea of time and space for a while, just ponder over the questions—Whence this Boat of our Life-Journey has started sailing? Where It is now? Whither It is bound? What is the aim of this journey? What is Its Goal? and, What is the relation between this Boat and Its Projector?

¹ Arnold, Heim and A. Gansser, 'Central Himalaya, Geological observations of Swiss expedition 1936'.

EPILOGUE

One can spend days and nights together like so many minutes, watching the weird grandeur, splendour, and majesty of the sacred Peak of Kailas without being tired, or in peaceful meditation and contemplation, by the side of the turquoise-blue surface of the charming Lake Manasarovar, lulled by her awe-inspiring solemnity and sublimity. One breathes more happily and with greater ease; one feels real pleasure in life, and yearns to remain sailing indefinitely on the fascinating blue depths and the sacred waves. Discoveries in the domain of geology or geography of the Mount Kailas or study of the hydrographic relation of this unique Lake to lakes similarly situated in other parts of the world are no doubt extremely pleasant pastimes and may be attempted by a person of an average intellectual calibre; but the inner joy which one feels, when one is face to face with an object of supernatural beauty and eternal charm, such as is presented by this Summit under a cupola of perpetual snow, where, according to Hindu traditions, Shiva (the Universal Spirit) abides permanently with His Divine Consort Parvati (the personification of *Prakriti* or Nature) and where, in terms of the Tibetan scriptures, the Buddha resides with his hierarchy of 500 *Bodhisattvas*, and the tutelary deity Demchhog (Supreme Bliss) with His Divine Consort Dorje-Phangmo (the Absolute Void), may be better described by one, more gifted poetically and aesthetically disposed than the author. How could Kailas and Manasarovar be the objects of Divine

honour from two religions so different as Hinduism and Buddhism, unless it be that their overpowering beauty and charm have not only so appealed to but also made an indelible impression on the human mind, that they seemed to belong rather to heaven than to earth ! Even the first view from the Gurla pass or from the hills on the shore is simply marvellous and breath-taking and causes one to burst into tears of joy at the magnificent landscape ; a more intimate association undoubtedly throws one into mystic trances, when, one feels nearer the Divine Presence than at any other time. The author feels that if he has been able to stimulate interest in any of his readers to undertake this very educative and wholesome journey to this abode of Bliss (Kailas and Manasarovar) in the Region of Snows (Himalayas) and to feel that inner joy which is surely to be felt by every mortal, like himself, his labour will have been amply rewarded. Besides, if some devotee, having been inspired by the August Presence, himself can hand over the Torch of Illumination to his fellow-brothers, the gratifying reflection of having originated and perpetuated this chain of inspiration will fill the author with supreme satisfaction—a natural and legitimate result of the fulfilment of a noble and self-imposed mission of serving humanity.

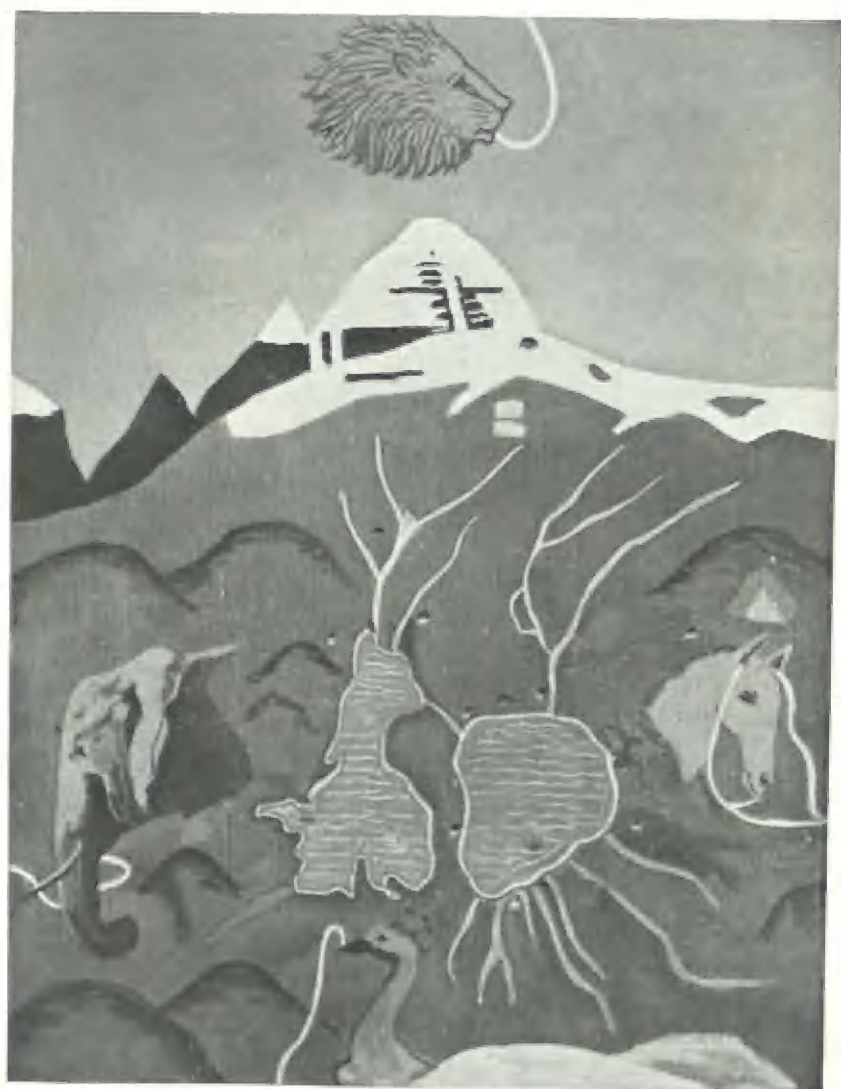
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1. Holy Mount Kailas.
2. Tijing.
3. Tsering-Chenga.
4. Nyanri Peak.
5. Ponri Peak.
6. Gurla Mandhata.
7. Thuki-Zingboo.
8. Tso Kapala.
9. Kurkyal-Chhungo.
10. Holy Lake Manasarovar .
11. Rakshas Tal or Ravan Hrad.
12. Lachato.
13. Topserma.
14. Lha Chhu.
15. Tarchhen Chhu.
16. Zhong Chhu.
17. Ganga Chhu.
18. Samo Tsangpo.
19. Tag Tsangpo.
20. Nimapendi.
21. Tarchhen.
22. Parkha.
23. Nyanri Gompa.
24. Zuthul-phuk Gompa.
25. Gengta Gompa.
26. Silung Gompa.
27. Gossul Gompa.
28. Chiu Gompa.
29. Cherkip Gompa.
30. Langpona Gompa.
31. Ponri Gompa.
32. Seralung Gompa.
33. Yerngo Gompa.
34. Thugolho Gompa (Thokar.)
35. Tsepgye Gompa.
36. Tarchhen Chhak-chhal-gang.
37. Tarbohchhe (flag-staff).
38. Chhorten Kangnyi.
39. Shapje (footprint).
40. Hanumanjoo.
41. Serdung-Chuksum.
42. Dolma La.
43. Shapje-dakthok.
44. Tarko La or Sera La.
Chak-chhal-gang.

(To face Plate 79)



70. The Sources of the Four Great Rivers, as described in Tibetan Scriptures
(Specially designed)

Oil-painting by Earl E. H. Brewster, Almora [See p. 20]



71. A *Leptche*, with Flags, Streamers, *Mani*-stones, Yak-horns, etc.,
near Tirthapuri [See p. 181]



72. Kanglung Kangri Glaciers [See pp. 208, 276]

EXPLORATION IN TIBET

PART III

NEW LIGHT ON THE SOURCES OF THE FOUR GREAT RIVERS

INTRODUCTION

Kangri Karchhak, the Tibetan *Kailas Purana*, says ¹ that the four great rivers called (1) Langchen ² Khambab, ³ or the Elephant-mouthed river (Sutlej), on the west, (2) Mapcha Khambab or the Peacock-mouthed river (Karnali), on the south, (3) Tamchok Khambab, or the Horse-mouthed river (Brahmaputra), on the east, and (4) Senge Khambab, or the Lion-mouthed river (Indus), on the north, have their sources in Tso Mapham, the lake unconquerable (Manasarovar). According to some other Tibetan traditions these four rivers take their sources from the Holy Kailas and have 500 tributaries each.

There had long been a controversy over the sources of these rivers, till matters were taken to have been set at rest by Dr. Sven Hedin's verdict in 1907-08. I had the good fortune, in 1928, to travel in Western Tibet on a visit to the Holy Kailas and Manasarovar. I went from Srinagar (Kashmir) through Ladakh, Demchhok, Gartok, Tirthapuri, Gyanima Mandi, round Kailas and Manasarovar, to Taklakot, again to Gartok, and back to Rishikesh by the Niti pass. In 1935 I made a second journey from Bhairav-ghati (Gangotri), by the Jelukhaga pass, ⁴ to Thuling,

¹ Refer to pp. 20, 21 for further details.

² The word *lang* means bull, *chen* means big, and the word *langchen* means elephant.

³ The word 'Khamba' (coming from the mouth of) is also used in its stead. Pronunciation of several Tibetan words varies from district to district and sometimes altogether different terms are used.

⁴ Also known as 'Sangchok la'.

Gyanima Mandi, Kailas, Manasarovar, and back to Rishikesh by the Damjan-Niti pass. In 1936-37, I travelled from Almora by the Lipu Lekh pass and returned by the same route. During the third visit I stayed for a full year in the Thugolho monastery, on the southern shore of the Manasarovar, when I had the rare opportunity of visiting the Sources of the Four Great Rivers of the Holy Lake. In 1938, I visited those places again from Almora by the Lipu Lekh pass and returned by the same route. I feel confident that with my extensive first-hand knowledge of these regions, I am in a position to say something about the verdict of Sven Hedin regarding the sources of the rivers Sutlej, Brahmaputra, and Indus.

At the very outset, I would like to ask geographers, geologists, and surveyors as to how the source of a particular river is to be fixed. If the river in question happens to have more than one head-stream, which of them is to be considered the main river? Is it decided by the quantity of water that it brings down or by the length of the particular head-stream, or is the source located from the traditions of the local people? If all the three factors are together to be taken into consideration, it would be impossible to locate the sources of the four great rivers of the Holy Kailas and Manasarovar, and other Himalayan rivers, inasmuch as none of the head-streams fulfils all the three conditions. If all the three conditions are not fulfilled, which of them should be given the greatest weight? and why?

The Sutlej, the Indus, the Brahmaputra, and the Karnali are considered sacred by the Tibetans, and their sources are regarded as even more sacred. In Tibet it is the custom to erect monuments in holy

places and on the tops of passes wherefrom a holy place is first seen. The monument may take the form of a *chhorten* (a pagoda-like structure) *mani*-wall (a wall on which *mani*-stones or slabs are kept), some *mani*-stones or slabs (on which the Tibetan sacred *mantra*, *Om ma ñi pad me hum*, is carved), cairns, coloured flags and festoons of rags, or at least heaps of stones (known as *laptche* in Tibetan). So it is natural to expect some such holy things at the sources of the four great rivers of the Holy Manasarovar; Sven Hedin too gives detailed descriptions of them at the source of the Indus, at the spring Langchen Khambab on the banks of the Tag tsangpo, at the spring Chakko (its correct name is Chhumik-thungtol), and at several other places, as given below. "Up on the slab of rock stand three tall cairns and a small cubical *lhat*o containing votive pyramids of clay. And below the *lhat*o is a quadrangular *mani*, with hundreds of red flagstones, some covered with fine close inscriptions, some bearing a single character 20 inches high. On two the wheel of life was incised, and on another a divine image, which I carried off as a souvenir of the source of the Indus.

"Our guide said that the source Singi-kabab was revered because of its divine origin. When travellers reached this place or any other part of the upper Indus, they scooped up water with their hands, drank of it, and sprinkled their faces and heads with it."¹

"Langchen-kamba is a small side-valley on the right, from which robbers are wont to sally forth

¹ Sven Hedin, 'Trans-Himalaya', Vol. II, p. 212.

against defenceless travellers. Just below the valley a spring bubbles forth with crystal-clear water at a temperature of 38°. It is considered holy, and is marked by a pole bedecked with rags and streamers like a scare-crow. This spring is also called Langchen-Kamba.

"A little further down the spring Chakko stands on a steep slope on the right bank, and its water (40.3°) is collected in a round pit 3 feet deep. A wall is erected about it, covered with flat stones, on which figures of Buddha and holy texts are carved. Leaves from the holy scriptures are thrust between the stones of the wall, and streamers and rags fly from a pole. Through the water, clear as a mirror, could be seen blue and red beads, two inferior turquoises, some shells, and other trash, thrown in as offerings by pious pilgrims. The water is supposed to have miraculous powers. Murmuring prayers, our guide filled a wooden bowl with water and poured it over the head and mane of his horse to protect it from wolves."¹

When Sven Hedin describes the source of the Brahmaputra, he however makes no mention of any such holy symbols, which are so very common in Tibet.

¹ *Op. cit.*, pp. 105, 106.

CHAPTER I

SOURCE OF THE BRAHMAPUTRA

According to Tibetan traditions, the source of the Brahmaputra lies not in the Kubi glaciers as claimed by Sven Hedin, but in the Chema-yungdung glaciers. While locating the sources of the Indus and the Sutlej, Sven Hedin tries to refer to Tibetan traditions in support of his findings, though he has not faithfully adhered to them in finally fixing the source of the Sutlej. But, unfortunately, all the quotations which Sven Hedin cites are from Chinese geographers and not even a single direct reference is made to any Tibetan work. In spite of the fact that none of the Chinese geographers have even mentioned the name of the Kubi, Sven Hedin persists in making the Kubi the principal branch of the Tamchok Khambab. We cannot give greater prominence to Chinese geographers than to the Tibetans themselves on such problems concerning Tibet. Some of the Chinese geographers themselves place the source of the Brahmaputra in the Chema-yungdung. Let me quote Sven Hedin's own remarks, "We have seen that *some*¹ of the Chinese writers make the Chema the principal branch, coming from Tamchok-kabab, others say that Chema is only a tributary joining Kubi. In all instances, both western and eastern, the Kubi-tsangpo has however, been almost ignored. The Chinese authorities do not

¹ To draw special attention of the reader certain portions in the quotations from Sven Hedin have been italicized by the author.

mention its name, although at least in one case it is called the Yere-tsangpo. Only Kawaguchi seems to have heard its name Kubi-chu."¹

When the question of the source of the Brahmaputra comes in, he does not give any Tibetan authority, except for a vague quotation from the 'Elements of Hydrography', by the Chinese author Chi Cho Nan (1762), which runs thus, "Langchen-kabab (mountain) lies south-east of Kailas. On the east of this mountain stands the Tamchok-kabab mountain which is the source of Tamchok-kabab or the Brahmaputra."²

"When the Chinese author informs us that east of Langchen-kabab lies Tamchok-kabab, which is the source of the river Yere-tsangpo (Brahmaputra), we must admit that his description is quite in accordance with the truth, as I, the first European to visit this country, have myself discovered.....And that the Tage-tsangpo was at one time considered by the Tibetans to be the headwater of the Sutlej is apparent from the fact that its name, Langchen-kamba, is still applied to the upper of the two sacred source streams in the valley of the Tage-tsangpo."³

Even this single quotation gives more support to my findings than to those of Sven Hedin, because the Chema-yungdung glaciers are east of and nearer to the Knaglung kangri glaciers (the source of the Tag), whereas the Kubi kangri glaciers (where Sven Hedin places the source of the Brahmaputra) are on the south-east of Kanglung glaciers, and not on the east, as has

¹ Sven Hedin, 'Southern Tibet', Vol. I, p. 118.

² 'Trans-Himalaya', Vol. II, p. 183.

³ *Op. cit.*, p. 165.



73. Chema-yungdung pu Kangri, one of the Source Glaciers
of Brahmaputra [See pp. 199, 278]



74. Tamchok Khambab Chhorten [See pp. 185, 199, 728]



75. Tamchok Khambab Kangri, Brahmaputra Glaciers
[See pp. 199, 278]



76. Dulchu Gumpa [See pp. 206, 284]

been mentioned by the Chinese author, whose authority Sven Hedin cites in his support.

Taking the Tibetan traditions into account, there is a monument (called *Tamchok Khambab Chhorten*) at the source of the Brahmaputra near the Chema-yungdung glaciers, shown to me by my Tibetan guide. There is a big boulder about 12 feet high, on the top of which are the footprints of a Buddhist monk,¹ and over the footprints a small hut has been erected with loose stone-walls and roof, with the horns of a wild yak placed on the top. Out of the two clay-made divine images kept in this small shrine, I carried away one² (with the consent of my guide) as a souvenir of the real source of the Brahmaputra, which I visited on June 17 and 18, 1937. Adjacent to the boulder are three *donkhangs* (Tibetan *dharmashalas* or rest houses), of which one was roofed. My guide told me that the Nyakora (meaning, *tirtha-yatri* or pilgrim) tribe of nomads go over there for yak-hunting at the end of summer, as it abounds in a good many wild yaks. All round the boulder are hundreds of cairns.

The Chinese map of the Ta-ch 'ing (A.D. 1744), prepared by Dutreuil de Rhins, has very correctly located the source of the Brahmaputra. His lake 'Djima Young rong' must be the Rapgyal-chhungo and Guru-kyök lakes in the Chema, a little down the confluence of Rongak chhu or it might be the network of the several moraine lakes (which the Chinese geographers might have noted as one continuous lake from a distance) in the upper course of the river

¹ According to some nomads the footprints are those of Lama Naropenchlung of the unorthodox Bon sect.

² This is preserved in the 'Asutosh Museum', Calcutta University.

Chema-yungdung, and the "Mt. Goumang, corresponds exactly to the Chema-yungdung-pu", as has been rightly suggested by Sven Hedin. This Chema-yungdung-pu massif could be seen from a distance ; but Mt. Tamtchouk Kabab cannot be seen from a distance and can be seen only when one actually goes right up to the Chema-yungdung-pu, since the Mt. Tamtchouk Kabab is about $1\frac{1}{2}$ or 2 miles west of the pu. This mount corresponds to the Tamchok Khambab Kangri of my Sketch of the Real Source of the Brahmaputra, so very faithfully indeed that the Chinese geographers of the Ta-ch 'ing placed the Mt. Tamtchouk beyond the Chema-yungdung-pu though they have not actually visited the place. They have not connected the Mt. Tamtchouk Kabab to the stream at the Mt. Goumang, perhaps because they have not actually seen the place. Herein lies the reliability of their work ! It was done similarly in the case of the source of Indus, Mt. Senghe Kabab, wherefrom no stream was shown coming out, since the Chinese writers did not actually visit the place. The only mistake that the Ta-ch 'ing committed is that it placed the Tamchok Khambab north of Goumang instead of on the west. This mistake is excusable in view of the fact that the Chinese geographers had not been actually to the place but got some information from the local people. So Sven Hedin need not be surprised if the little stream that flows into the lake Djima Young rong is not joined upwards with the Mt. Tamtchouk Kabab, in the map.

The Chinese Civil Officer J. Klaproth (1840) writes that the Brahmaputra takes its source in the Tamchok Khambab snow-mountain from out of a little lake called ' Djimagoungroung ', situated east of the

Langchen Khambab or the source of the Sotlej. 'Djimagoungroung' is the corrupt form of Chema-yungdung. So, the Chinese geographer Klaproth correctly places the source of the Brahmaputra in the Chema-yungdung. I too came across several moraine lakes in the bed of the Chema-yungdung as well as in that of the Angsi, when I visited the actual source of the Brahmaputra. There are two small lakelets in the Chema-yungdung-pu glaciers themselves, a little up the tongue where there are huge debris; and two big lakes Guru-kyok and Rapgyal-ehbungo in the Chema-yungdung itself, down Rongak chhu. These two lakes are conspicuously seen from long distances, especially from the heights on either side of the Chema where Sven Hedin travelled. I cannot say with certainty as to whether Sven Hedin did not look back to see these lakes or wantonly evaded the question. As a matter of fact, Sven Hedin saw these two lakes and says "The Ronggak-chhu is an affluent of the Chema, and comes from the north-west. We left the little double lake Kuru-chok in the south."¹ Yet, Sven Hedin twists Klaproth's plain and correct statements in order to support his own views, and then accuses D'Anville with misunderstanding the Chinese hydrography. Sven Hedin writes, "so far as I could see the course of the river Chema-yundung no lake was visible.....He (d'Anville) seems so far to have misunderstood the Chinese hydrography, that he has placed the name Yarou Dsanpou ou Tsanpou R. along the river which corresponds to Chema-yundoung."²

1 Sven Hedin, 'Trans-Himalaya', Vol. II, p. 104.

2 Sven Hedin, 'Southern Tibet', Vol. I, p. 94.

D'Anville, in his map of A.D. 1733, rightly placed the source of the Brahmaputra in the Chema-yungdung (his Yarou Dsancpou). Commenting on it, Sven Hedin says, "If d'Anville had only placed the name Yarou Dsancpou along this last-mentioned branch (Kubi), his map would have been correct in this point."¹ How queer and unjust are his wishes and remarks! Since *yaru* means 'upper' in the Tibetan language and since the Chema-yungdung is the upper of the two rivers, it is the Chema-yungdung that must be the Brahmaputra but not the Kubi!

Lloyd and Gerard write, "The Brahmaputra is named Tanjoo Khampa, or Erechoomboo, and one of its streams takes its rise to the south-east of Manasarowar."² At another place Gerard remarks that "*One stream, which is reckoned the principal, rises south-east of Mansurowur, and there are others from the eastward.*"³ Indeed this principal stream must certainly be our Chema-yungdung and the 'others from the eastward' must necessarily be the Kubi and others. So, according to Gerard, the Kubi is only a tributary but never the principal stream.

Henry Strachey (1846) very correctly describes the Chema-yungdung to be the Brahmaputra. The valley of the Chema-yungdung is covered with white sands from the source down to a distance of about ten miles. The white sands (*chema*) of the river are very conspicuous and could be seen from long distances as if there has been a fresh snowfall. As he gives graphic descriptions of the sands of the Chema-yungdung it is

¹ *Op. cit.*, Vol. II, p. 220.

² Narrative of a Journey, etc., by Sir W. Lloyd and Capt. Alex. Gerard's Account of an attempt, etc.....London, 1840, Vol. II, p. 186.

³ *Ibid.*

very probable that Strachey might have got first-hand information from some authentic Tibetan sources. Even in this case, Sven Hedin summarily dismisses Strachey's findings most peremptorily hiding his face from truth. Here is Sven Hedin. "Here the confusion comes in: The Tamchok-kamba rising from a place called Chema-yundung. Where then is Tamchok-kabab or the Horse river situated? Chema-yundung may easily be the name of a sandy region, but the river that flows through it is not Tamchok-kamba but Chema-yundung."¹ If we are to argue like this, the river which flows out of his Kubi glaciers can only be the Kubi tsangpo, as he himself puts it; how can it be, I ask, the Tamchok Khambab? "And the source of this river is a glacier, or perhaps several glaciers in the mountain called Chema-yundung-pu. In this particular point *even the vague hydrography of KAWAGUCHI is better than Henry Strachey's.*"² How unjust and unfair it is on the part of Sven Hedin to compare the great geographer Strachey with Kawaguchi, who was incapable of holding anything but crude geographical notions, namely, that the circumference of Manasarovar was 200 miles, that he had a good drink of the Ganges water, at the spring Chhumik-thungtol, on the east of Manasarovar, and so on! A mere incidental mention of the name of the Kubi by Kawaguchi is good enough for Sven Hedin to cite in order to explode the most authentic and first-hand information of the great geographer, Strachey, and to support his own views!

In his book 'Three Years in Tibet', Ekai Kawaguchi writes that he crossed the river Kyang-chu first "which was about four hundred and fifty

¹ 'Southern Tibet', Vol. II, p. 224.

² *Ibid.*

yards wide at places, while it narrowed to sixty yards or so at others,"¹ and three or four days later he crossed the Tamchok Khanbab, the width of which "was not more than a little over a mile."² Then after about three days' journey he crossed the Chema-yungdung-gi-chu, which was a hundred and eighty yards wide and was so deep that he had to swim across.³ This was on his onward journey to the Holy Lake.

On his return journey from Kailas, Kawaguchi writes that he "finally reached the lower course of the river Chema-yungdung, where I had narrowly escaped drowning a short time before."⁴ After two days' further journey, at the rate of 25 miles a day, from the Chema, "we reached the Brahmaputra, known in this region as Martsan-gi-chu or Kobei-chu according to the districts which it traversed. The lordly river was quite shallow and could be crossed without trouble, and I did so as before on the yak's back."⁵ After five or six days' further march from the Brahmaputra, Kawaguchi writes, "I found the familiar Kyang-chu river, which I was delighted to see."⁶ "I crossed the river about nine miles above the place where I had crossed it on the previous occasion."⁷ Fifteen days after, he again "crossed the Brahmaputra."⁸

The reader may note from Kawaguchi's map that there are only two rivers which are cut by his route on his onward and return journey from Kailas,

- 1 P. 104.
- 2 P. 110.
- 3 Pp. 120, 131.
- 4 P. 184.
- 5 P. 185.
- 6 P. 195.
- 7 P. 196.
- 8 P. 208.

besides a third one which is definitely the Brahmaputra. Of the two he gave the name 'Kyang chu R' to the first one. Now comes the question as to what might be the unnamed river? It must be either the Brahmaputra, which he calls 'Tamchok Khanbab' on his onward journey and 'Martsan-gi-chu or Kobei-chu' on his return journey, or the 'Chema-yungdung.' If it is argued that this is the Brahmaputra, where then is the Chema-yungdung which was so deep and broad that he had to swim a long way to cross it, and in which he was drifted away and narrowly escaped drowning? Indeed, he did show on his map the Kyang-chu, a much shallower and smaller river than the Chema; why then did he not indicate the river Chema, by far the longer and the bigger one? If it is argued that the unnamed river in his map is the Chema itself, how was it that he omitted to give the Tamchok Khanbab which was one mile broad and the beach on the eastern side was two and a half miles broad and that on the western side half as much? Or it might be that he had considered the unnamed river to be the upper course of the R. Brahmaputra, in which case we shall have to conclude that he was not definite as to which of the two rivers Chema or Kobei is the actual Brahmaputra. In any case, it is evident that his map and writings do not tally and that his hydrography and topography of this area is hopelessly vague, confusing, and misleading. Certainly, he must have heard the names 'Martsan-gi-chu', 'Kobei', and 'Tamchok Khanbab'; but having made a mess of all these, he confused the Chema with the others; because he writes that after crossing the Chema he crossed the Brahmaputra, which he called Martsan-gi-chu or

Kobei. But the Kobei is not at all called Martsan-gi-chu, and the one he did actually cross was not the Martsan-gi, since, it is stated by him, that some days later he crossed the Kyang-chu again. Either by mistake or through being misinformed, Kawaguchi incidentally mentioned the Kobei and the Martsan-gi-chu to be the Brahmaputra. Sven Hedin gives a big name 'hydrography'—with a nullifying adjective 'vague'—to the single line of the meagre and wrong information of Kawaguchi. It is this 'vague hydrography' that Sven Hedin exultantly brings forward in order to 'explode' the most authentic information of the great geographer Strachey and to support his own theory that the Kobei is the main Brahmaputra!

It may be interesting to note here that the Brahmaputra (Tamchok Khambab) is also called Martsang Tsangpo and that the lower course of the river Chema-yungdung is also called Martsang Tsangpo or the Tamchok Khambab even much above Shamsang where the Kubi joins the Chema. This also conclusively goes to prove that the Chema-yungdung is the principal branch of the Brahmaputra.

Sven Hedin's enthusiasm for fame seems to have got the better of him, thereby leading him to a deliberate suppression of facts. It is for the geographers to conduct a thorough investigation into the truth of the matter and test the validity of Sven Hedin's claims. Sven Hedin further remarks, "It is not surprising that Strachey's informant knew only the Chema-yungdung and consequently believed that it was the source of the great Tsangpo. For the ordinary road over Tamlung-la touches Chema-yungdung but not at all the principal river, which is Kubi-



77. Ganga Chhu flowing at the foot of Chiu Hill [See p. 22]



78. Dr. Sven Hedin, the Famous Swedish Explorer
[See p. 56]



79 Sutlej Flowing out of Rakshas Tal [See p. 231]



80. Senge Khambab, the Spring-Source of the Indus
[See pp. 248, 271]

tsangpo. The nomads prefer the grass of the Chema-yundung which is more abundant and easier to get at. *And there may, perhaps, be Tibetans, who really regard the Chema-yundung as the source of the Tsangpo*, in which case, however, the Tamchok-kabab would have to be placed at Chema-yundung-pu, which is not the case."¹

When Sven Hedin could find out so many details about the Chema-yundung, is it not really surprising to note that he could not find out the lakes in the Chema (that were noted by the Chinese geographers), and that he did not care to go to the Chema for making fuller investigations? It seems also that Sven Hedin had studied the Chinese geographers, only after he had fixed the source in the Kubi. Had he studied the Chinese geographers before he went to Tibet he would have certainly agreed with them and would have placed the source of the Brahmaputra in the Chema, as I did. Since he had at first fixed his source of the Brahmaputra in the Kubi before consulting the Chinese geographers, he had perforce to struggle hard against the Chinese findings and strive vigorously to twist their records in support of his findings.

Graham Sandberg was quite right in describing the Chema-yundung as the real source of the Brahmaputra. But Sven Hedin disposes of his findings as being incorrect and consoles himself by passing some shallow remarks and at the same time claiming himself to be the first discoverer of the source of the Brahmaputra.

Somehow, Nain Singh (1866) also makes the Chema-yundung the principal river of the Tamchok

¹ Sven Hedin, 'Southern Tibet', Vol. II, p. 224.

Khambab, from the information he had collected from local Tibetans.

Major Ryder and Rawling crossed the Maryum la on November 26, 1904 on their way to Gartok. They must have certainly enquired from the several Tibetan shepherds camping between Shamsang and Thokchen who go to the pastures of Chema-yungdung, Angsi, and Kubi for grazing their cattle and for hunting the wild yak. They all very well know, and as a matter of fact, go to the Tamchok Khambab at the head of the Chema-yungdung on a pilgrimage. So, Ryder must have enquired and got first hand information from some of his yak-men and guides as to where the actual source of the Brahmaputra lies. So, he was perfectly right and justified in making the Chema-yungdung the main river of the Tamchok Khambab or the Brahmaputra, and the Kubi only a tributary. As a matter of fact, any Tibetan, between Thokchen and Shamsang, would tell you where the Tamchok Khambab is though he might not have actually gone there, for several people know by heart the *Kanqri Soldep* (summary of the *Kailas Purana*), in which the description of Tamchok Khambab is given, as being situated at the head of the Chema-yungdung.

The fact underlying the whole affair is that Sven Hedin could not get an opportunity to go to the Chema-yungdung. He thought that he would be able to investigate the sources of the Sutlej and the Indus also on the same basis (by measuring the quantities of water) as in the case of the Brahmaputra and never even dreamt that he would miserably fail to do so, and that he would be forced to fall back on the Tibetan traditions to support his findings. To his great disadvantage and dis-

appointment the Tibetan Government were putting obstacles in the freedom of his movements. As a matter of fact he had to exercise great tact and elude the Tibetan officers at Parkba (midway between Kailas and Manasarovar), so that he might get an opportunity of visiting the source of the Indus from the northern side of Kailas. What he had contrived to achieve his object was this: He despatched the whole of his caravan, from Khaleb to Gartok by the *tasam* (high road) with instructions to march very slowly and himself went to the Senge Khambab, telling the Tibetan officers that he was going only for a few days' excursion into the mountains on the north and that he would soon come back to join his main party on the *tasam*; so he had neither choice nor time to fix the source of the Indus and the Sutlej after duly measuring the quantity of water which the different head-waters discharged and then to proceed to the head of the biggest of them. Nor could he willingly let the results of the work he had done at the Kubi go in vain. Besides other things, he did not like to spend much time at the Senge Khambab, in measuring the water in the different head-streams and in going to the source of the biggest, because he was not certain as to which of the two streams—the Senge or the Gartong—would carry more water, since he had yet to make the actual measurements. If the latter happened to carry more water, as it does oftentimes (which fact I gathered from local information), he would have to place the source of the Indus at the head of the Gartong chhu, according to his "theory of greater quantity of water" (as in the case of the Brahmaputra), and consequently the results he had worked out at the Senge Khambab

would be in vain. So he had to fall back solely on the Tibetan traditions and rest content with the remarks that "The problem cannot be settled in any more satisfactory way than to accept the Tibetan view", and "Any attempt to persuade the Tibetans would fail, for it had tradition in its favour." Has this sapient explorer, who shows off his broadmindedness towards other civilizations, cared a straw for the Tibetan traditions in fixing the source of the great river Brahmaputra, one of the four holiest rivers of the Tibetans?

Sven Hedin would have served the cause of truth better if he had frankly admitted the difficulties of deciding upon suitable and consistent criteria for fixing the sources of these rivers instead of struggling desperately for the achievement of the coveted honour of being the first and original discoverer of the sources of these three rivers. By giving preference to the quantity of water in the case of the Brahmaputra, tradition in the case of the Indus, and far-fetched tradition and length in the case of the Sutlej, he has not hesitated to sacrifice mercilessly all consistent, reasonable, and uniform procedure which has to be adopted in dealing with such important problems. Had not Sven Hedin been compelled to go by a devious route for securing guides and yaks, he would certainly have gone to the head of the Chema-yungdung, and, would, I am sure, have, without any hesitation whatsoever, fixed the source of the Brahmaputra in the Chema yungdung glaciers, in confirmation of the reports of the nomads and the people of Bongba he would meet on his way. And later on he would have found that D'Anville (1733), the Chinese Map of Ta-ch'ing after

Dutreuil de Rhins (1744), the Chinese Geographer Chi Chao Nan (1762), the Chinese Civil Officer Kloploth (1840), Llyod and Gerard (1840?), Strachey (1846), Nain Singh (1866), Sandberg (1904), Major Ryder (1904), and others who had obtained first-hand information through local Tibetans, were quite right in placing the source of the Brahmaputra in the Chema-yungdung and in making the Kubi a tributary to it. Little did he dream that a lay monk, who would be on a spiritual mission at the Holy Lake on several occasions, possessing none of the facilities and equipment that the Western explorers always have at their disposal, would upset his theories in 1937!

The following lines from Sven Hedin will speak for themselves regarding the hollowness of his arguments and the helpless way in which he begs the question: "I cannot, however, judge in this case, as I never went up to the source of the Chema-yundung-chu.....*This problem will have to be solved in the future and the very source of the Chema-yundung, even if well-known by certain Tibetan tribes, has not yet been discovered by any European.*"¹ Thus Sven Hedin consoles himself, in his inability to visit the Chema-yundung under forced circumstances, by saying that it has not yet been discovered by any other European. Further, while admitting that "The problem will have to be solved in the future," he, at the same time, claims himself to be the first discoverer of the real source of the Brahmaputra! Some travellers previous to Sven Hedin had seen the Chema-yundung from a

¹ Sven Hedin, 'Southern Tibet', Vol. II, p. 248.

distance and located it as the source of the Brahmaputra; even so did Sven Hedin simply see the Kanglung kangri from a distance and fix the source of the Tag (and hence the Sutlej) in it. If the actual visiting of the glacier is a necessary condition, Sven Hedin too cannot claim to have discovered the source of the Sutlej in the Kanglung kangri since he did not actually go to the glacier and make a thorough investigation as in the case of Brahmaputra, for there is more than one glacier in the Kanglung group as in the Kubi.

A little further Sven Hedin says, "The most comfortable and shortest way to Tag-la or Tamlung-la would have been to follow the course of the Chema-yundung and its tributary Angsi-chu to the west, which would have spared us the Maranyak-la; but I had to take the longer and more difficult way to the north to reach a Camp where new guides and yaks could be had, as my men from Shamsang had to return from here."¹ "The Chema-yundung seems to be a few miles longer than the Kubi. So in length and absolute height the western branch is no doubt more distinguished than the eastern. But the volume of water is overwhelming in the latter, and all who in future see both rivers will agree with the Chinese and Tibetans, as I did, and call the Kubi-tsangpo the source of the Brahmaputra."²

In spite of the fact that the Chema-yungdung is the traditional source and is more distinguished by its length and absolute height than the Kubi, Sven Hedin overlooks all these points, and gives preference to the volume of water and puts the source in the Kubi

¹ *Op. cit.*, p. 264.

² *Ibid.*

glaciers. But in fixing the sources of the Sutlej and the Indus he gives absolutely no place or consideration whatsoever to the volume of water. Can anybody pronounce such findings to be scientific?

"Sven Hedin had moreover an advantage over Moorcroft and Strachey, in that he was a Tibetan linguist and on friendly terms with the Tibetans."¹ As such Sven Hedin should have at least pondered over the meaning of the word Tamchok Khambab. *Ta* means horse, *amchok* means ears, and *khambab* means coming out of the mouth of. So the meaning of the word Tamchok Khambab is 'Horse-ears-mouthed river'.² The sources of the four great rivers are located by Tibetans in certain springs, to which they attribute the appearance of the mouths of various animals just as the Hindus call the source of the Ganges '*Gaumukh*' or Cow-mouth. There are two glaciers, called Chema-yungdung-pu and the Tamchok Khambab kangri with a broad-faced peak separating them. The monument or the shrine is situated on the left bank of the Brahmaputra (where it is called Chema-yungdung chhu) between these two glaciers and opposite the broad-faced peak. There is a dry spring nearby, which is said to contain water in the summer and rainy seasons. The two glaciers are the two ears, and the boulder is the mouth. Both these glaciers together go by the general name of Chema-yungdung-pu, or simply Chema-yungdung. The

¹ Barrard and Hayden, *op. cit.*, p. 229.

² This is the derivation of the term 'Tamchok Khambab' as given by some Nyakora nomads on the spot. The word *Tamchok* also means celestial horse. So even if the first meaning of the term is not correct from a literary point of view, it does not materially affect my general findings.

distance between the two glaciers is about $1\frac{1}{2}$ or 2 miles. A little to the north or north-west of the Tamchok Khambab glaciers is another smaller glacier or snow-field behind which is the Angsi glacier.

It is really regrettable to note that Sven Hedin did not care to make inquiries from the nomads and from the Bongba pilgrims to Kailas whom he passed in the "broad open valley of the Chema-yundung river, which descends from a very extensive glacier in the south belonging to the Chema-yundung-pu massive." Besides this, he tries his level best to place the source of the Brahmaputra in the Kubi kangri glaciers by giving us facts and figures to show that the Kubi tsangpo discharges more water than the Chema-yundung. But unfortunately he totally forgets this "theory of greater discharge of water", when he locates the sources of the Indus and the Sutlej and falls back to Tibetan traditions. "the one, which so long as records exist, has been called Satlej by the natives, must be regarded as the head river."¹

Regarding the source of the Brahmaputra, Sven Hedin writes. "No other traveller had ever been in this region, and I would on no account miss the opportunity of penetrating the actual source of the Brahmaputra and fixing its position definitely.....At Shamsang the source streams meet, and below this point the united river bears the name Martsang-tsangpo. First of all, I must, of course, gauge the quantities of water in the source streams, and, if they were nearly equal, we must be content to say that the Brahmaputra has several sources.....I betook myself first, on July 8, to the point on the southern side of the valley



81. Mapcha-Chungo, Spring Source of the Karnali

[See pp 250, 283



82. Kalapani, the Spring-Source of the Karnali [See p. 254



83. His Exalted Holiness the Dalai Lama,
Political and Spiritual Head of Tibet

Photo by Courtesy of Lama Urgen

[See p. 124]



84 A Batch of Tibetan Soldiers on the occasion of the *Chhongdu*-Horse-
Race Fair at Gartok

[See p. 127]

where two streams run together, the Kubi-tsangpo from the south-west and the Chema-yundung from the west. A short day's march further west the Chema-yundung receives the Marium-chu, which comes from the Marium-la. First the united stream was gauged, and found to discharge 1554 cubic feet of water per second, and immediately after the Chema-yundung, which discharged almost 353 cubic feet. Subtracting this from the volume of the united river, we get 1201 feet as the discharge of the Kubi-tsangpo. This river is then three and a half times as large as the Chema, and it should be remembered that the Chema also receives the water of the Marium-chu, so that its 353 cubic feet represent the united volumes of two tributaries.....To arrive at the source we had only to know that the Kubi-tsangpo is far larger than the two others, so we have to follow its course up into the mountains, which none of my predecessors had done. The Tibetans also said that the Kubi was the upper course of the Martsang-tsangpo." ¹

"We crossed another saddle, Sen-kamba-la, to reach the broad open valley of the Chema-yundung river, which descends from a very extensive glacier in the south belonging to the Chema-yundung-pu massive. Here were several nomad tents, and seven tents inhabited by pilgrims from Bongba stood on a rise. They were on their way with kith and kin to Kang-rinpoche to make the pilgrimage round the holy mountain. Most of the pilgrims from the far east take this southern route and return over the Marium-la." ²

¹ 'Trans-Himalaya', Vol. II, pp. 90, 91.

² *Op. cit.*, p. 103.

In fact, according to the Tibetan traditions the source of the Chema-yungdung is the source of the Brahmaputra, and the Chema-yungdung is the actual Brahmaputra; it is also longer than the Kubi. So whether length or traditions be taken into consideration, the source of the Brahmaputra cannot be placed in the Kubi glaciers, and must be placed in Chema-yungdung glaciers. But if one persists in placing the source of the Brahmaputra in the Kubi glaciers on the ground of its quantity of water, the present location of sources of the Indus and the Sutlej must be taken as incorrect and should, therefore, be shifted to some other places. If the sources of the rivers are to be fixed according to local traditions, as is done in the case of the Ganges and several other rivers, the source of the Brahmaputra should be shifted from the Kubi to the Chema-yungdung. So, whichever theory be followed, Sven Hedin cannot claim to be the discoverer of the sources of the Brahmaputra, the Indus, and the Sutlej, as he asserts thus, "If geographers had been asked in the year 1906 to point out on a large-scale map of Western Tibet the source of the Brahmaputra, they would have been considerably perplexed, and each would have laid his finger on a different place. Even those who knew Ryder's results would have given undecided answers. No one, not even Ryder himself, could have placed the points of compasses on a particular point and said 'Here.' The position of the Sutlej source would have been fixed with still greater uncertainty, and only those who knew the records would have answered that the question had not yet been decided. The source of the Indus might have been located within a narrower circle, though its radius would have measured 20 miles;

but no European had tried to reach it, and Montgomerie's pundits had been obliged to turn back when they were still several days' journey from the source. *At last in the year 1907 I succeeded in finding my way to the sources of all three rivers.* I succeeded because I was determined to find them, and because I did not give myself up to chance like chaff driven before the wind. In the case of Brahmaputra and the Indus, I followed the streams upwards, which is the surest method."¹ In fact, he did not follow the stream upwards in the case of the Indus.

In spite of Sven Hedin's verdict in 1907, and the subsequent acceptance of the same by Burrard of the Survey of India, the sources of the four rivers Sutlej, Indus, Brahmaputra, and Karnali were, as a matter of fact, as uncertain, in the year 1936 (that is, 30 years after Sven Hedin) even as they had been in the year 1906. At last it was in the year 1937 that I succeeded in discovering the sources of these four rivers from all points of view, namely, tradition, volume, length, and glaciers.

Here one more point conspicuously attracts our attention. On a close observation of Sven Hedin's map we note that he gives the Tibetan names of only three sub-glaciers of the Kubi kangri group (Langta-chen glacier, Absi glacier, and Ngomo-dinding glacier) but not of the Brahmaputra glacier. Brahmaputra glacier is the Indian name and certainly not the Tibetan name. Why should he particularly evade giving the Tibetan name of the Brahmaputra glacier, when he could give us the Tibetan names of the sources of the Sutlej (Ganglung glacier) and the Indus (Singi-kabab)? Is

¹ 'Trans-Himalaya', Vol. III, p. 210.

it because that Sven Hedin believed that " Providence had reserved for him the triumph of reaching the actual source of the Brahmaputra " ? The Tibetan name of the Brahmaputra glacier would have given us a clue as to whether the Tibetans really consider that to be the source of the Tamchok Khambab.

If there be an impartial judge, I would stand before him and claim the trophy for having discovered the real sources of these four great rivers after actually visiting them. Except for the Tibetans themselves, I can say without fear of contradiction that I am the first to visit and discover the sources of all these four rivers simultaneously, inspite of a complete lack of the expeditional equipment which all the previous explorers had. If anybody wants to verify the validity of my findings, I am ready to accompany any expedition partly and guide it to the various sources of these rivers and prove the truth of my statements to their entire satisfaction. Had Sven Hedin cared at least to note the traditional source of the Brahmaputra, he could have very easily got the information from any nomad or Bongba tents which he came across on his way to Manasarovar from the Kubi. From all that I have discussed and described if one judges with an unbiassed mind, one cannot but conclude that Dr. Sven Hedin either consciously evaded the question of traditional source in the case of the Brahmaputra in order to have the sole credit of being the " first white man and European " to discover it, or made a grievous blunder in locating the source in the Kubi glaciers instead of placing it in the Chema-yungdung glaciers. My readers may hesitate to accept the first view, but I am reluctant to accept the second in view of the

fact that Sven Hedin had travelled for several days amongst those tracts and amongst people most of whom very well knew the Chema-yungdung to be the real source of the Brahmaputra according to their tradition and several of whom actually go to the very source of the Brahmaputra for hunting the wild yak.

Of the four head-waters of the Brahmaputra—the Kubi, the Chema-yungdung, the Angsi, and the Marium chhu—the Kubi is the biggest ($3\frac{1}{2}$ times the Chema), and as such its source in the Kubi glaciers should be regarded as the source of the Brahmaputra if the quantity of water is taken into account. But if length should be the deciding factor, the Chema-yungdung, which is 6 or 7 miles-longer than the Kubi (which Sven Hedin himself admits), should be the main stream of the Brahmaputra. The Kubi glaciers are at a distance of nearly four short days' march from the Chema-yungdung glaciers. Then again Angsi chhu may be a bit longer than the Chema-yungdung and the Angsi glaciers also are equally massive. It seems, therefore, that we may have to shift the source of the Brahmaputra to the Angsi.

One more interesting point before I finish with the Brahmaputra. After the Angsi and the Rongak chhu join the Chema-yungdung, a little further down, the Chema broadens into two lakes called Guru-kyok and Rapgyal-chhungo. The Bhötia merchants who go from Manasarovar beyond the Kubi chhu¹ for purchase of wool, regard this broadened portion of the river (double-lake), as the source of the Brahmaputra and call it Brahma-kund; as such, they consider it sacred and bathe in it.

¹ Also called 'Kupi chhu'.

CHAPTER II

SOURCE OF THE SUTLEJ

Regarding the source of the Sutlej Sven Hedin writes, "The monks (of Dolchu-gompa) believe that the water comes from Langak-tso, but nevertheless they call it (the spring at Dolchu) the Langchen-kabab, the river which flows out of the mouth of the elephant."¹

Here I would like to draw the attention of the reader to the following passage: "A year later I followed the old bed a day's march further west, and found at Dolchu-gompa permanent springs of abundant water, which likewise well up on the bottom of the bed. From here and all along its course through the Himalayas the Tibetans call the Sutlej Langchen-kamba, the Elephant river; the hill on which the convent Dolchu-gompa is built is supposed to bear some resemblance to an elephant, and hence the name. The spring at Dolchu is called Langchen-kabab, or the mouth out of which the Elephant river comes, just as the Brahmaputra source is the Tamchok-kabab, or the mouth out of which the Horse river comes, and the Indus source is the Singi-kabab, or the mouth from which the Lion river comes. The fourth in the series is the Mapchu-kamba, the Peacock river or Karnali. *The Tibetans assert that the source of the Sutlej is at the monastery Dolchu, not in the Himalayas or the Trans-Himalaya, from which, however, it receives very voluminous tributaries. They*

¹ 'Trans-Himalaya', Vol. II, p. 187.

are also convinced that the source water of the Langchen-kamba originates from Langak-tso. And I would draw particular attention to the fact that the first of the two holy springs which pour their water into the Tage-tsangpo is also called Langchen-kamba, a proof that in old times the source was supposed to lie to the east of Tso-mavang." ¹

The above passage is characteristic of Sven Hedin's argumentation. One can note how he deduces inferences to suit his purpose. He further says, "Worthy of notice is the circumstance that, according to the lamas of Tirtapuri, the Sutlej came from Rakas-tal, though the channel between the two lakes was dry, and therefore no water could flow out of the western lake unless through subterranean passage. Hence it seems that the monks trace back the Sutlej to Rakas-tal, inspite of climatic variations which cause the water to fail periodically." ²

"Colebrooke, however, adds the suggestion that the lake when it rises sufficiently may discharge its surplus water to Rakas-tal, from which the Sutlej originates.....It is not enough to say that Manasarowar is the source of the Sutlej. The largest of the streams that feed the lake is the uppermost course of the Sutlej. And as the Tage-tsangpo is very much *larger than all the rest*, there can be no doubt where the real source lies." ³

The statement of Sven Hedin that "The Tibetans assert that the source of the Sutlej is at the monastery Dolchu, not in the Himalayas or the Trans-Himalaya,

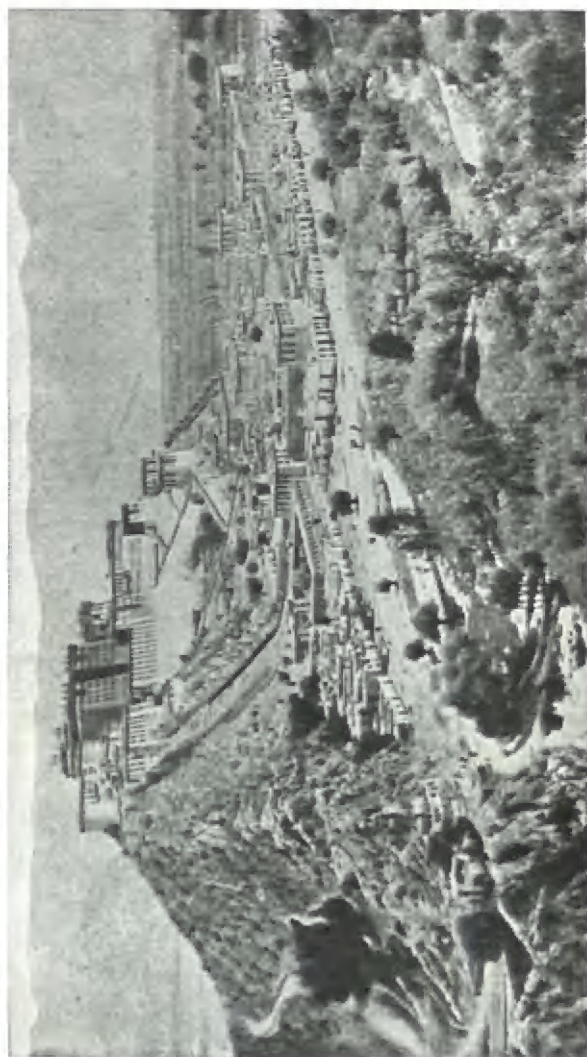
¹ 'Trans-Himalaya', p. 182.

² *Op. cit.*, Vol. III, p. 213.

³ *Op. cit.*, p. 212.

from which, however, it receives very voluminous tributaries," is in consonance with and in corroboration of the *Kangri Karchhak* which describes that, "the Sutlej (Langchen Khambab) takes its rise from out of the springs in the ground, on the west of Manasarovar, at a *pagche* (distance of a day's journey) from Kailas." It is clearly written in the Tibetan scripture, the *Kangri Karchhak* that the four great rivers take their rise from the four directions of the Kailas and Manasarovar, that the Langchen Khambab has its source on the west of Manasarovar, and that the Tamchok Khambab has its source on the east of Tso Mavang. On the face of such an unambiguous statement on the part of the Tibetans and their scriptures and with all his professed respect for the local traditions, it is hard to understand why Sven Hedin goes on shifting the source from Dulchu gompā to Rakshas Tal, then to Manasarovar and thence to the spring Langchen Khambab on the Tag tsangpo and finally to Kanglung kangri, wherefrom the Tag takes its rise. Had Sven Hedin really cared to respect Tibetan traditions how could he place the source of both the Langchen and Tamchok Khambabs on the east of Manasarovar? Whereas in the case of Indus, he retains the source as it is in the springs of Senge Khambab and does not trace it back to the source of any river like the Bokhar-chhu into which the water of the springs flows.

According to Sherring also the actual source of the Sutlej is in the springs at Dulchu gompā. "The actual source of this river is at the monastery of Dulju where there is a large spring, though a dry channel is continued up to the Rakshas tal, and in places in this

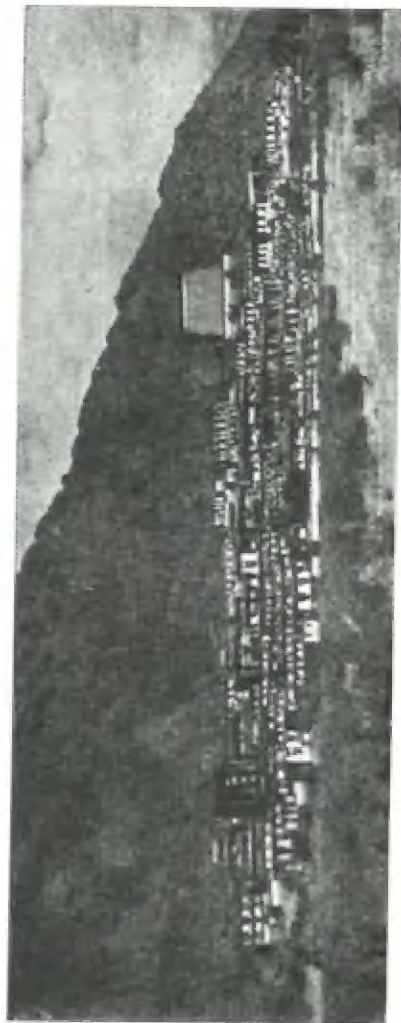


85. Potala, the Residence of the Dalai Lama

Photo by Courtesy of Sir Charles Bell (Collins, London)

[See p. 124]





86. Tashi-Lhunpo, the Abode of the Panchhen Lama
Photo by Courtesy of Sir Charles Bell (Collins, London)

[See p. 124

channel water is found. The local statements all agree in asserting that there is an underground flow of water throughout the entire length of this dry channel, which occasionally comes to the surface only to disappear later on. There can be no doubt, that during a season of very heavy rain and floods this dry channel would connect the source at Dulju with the Rakshas tal."¹

Sven Hedin says, "If we compare the two branches (Tirthapuri and Langehen Tsangpo) and ask which of them should be reckoned as the original source of the Sutlej, I should give this honour to the one which has the *largest course and comes from the highest and most extensive glaciers*."² While fixing the source of Brahmaputra he forgets both *length* and *height* and in the case of Indus, somehow, he overlooks *all the three*. From this the reader can very well judge how he loses all sense of proportion in applying a uniform procedure in fixing the sources of these rivers belonging to the same Region.

There is yet one more issue of serious consideration for further exploration and that is as follows: Some Tibetans believe and say that the Sutlej (Langehen Khambab) disappears at Lejandak and reappears in the springs at Dulchu Monastery and that is why they hold the springs at Dulchu to be the traditional source of the Sutlej according to their scriptures. The distance between Lejandak and Dulchu is a short day's march. But one Johar merchant at Tarchhen (southern foot of Kailas) told me that he had travelled from Dulchu to Lejandak on his way to Kailas along

¹ Sherring, 'Western Tibet' (1906), pp. 284, 285.

² Sven Hedin, 'Southern Tibet', Vol. II, p. 77.

the Sutlej in the years 1937 and 1938 and saw water flowing very slowly in it. I cannot definitely say whether he actually saw the Sutlej or mistook some other stream for the Sutlej. I too noted once the flow of water from Lejandak to Dulchu in the year 1939.

As argued by Sven Hedin in fixing the source of the Brahmaputra, if the quantity of water is taken into consideration, the source of the Sutlej cannot be placed in the Kanglung glaciers but somewhere else. Personally I prefer the local traditions in fixing the source of a river to any other considerations. But I am simply offering a suggestion in case the criterion for deciding the source of a river is changed.

About $5\frac{1}{4}$ miles down Tirthapuri is the interesting Lamasery of Guru-gem, situated at the confluence of the Langchen Tsangpo or Langchen Khambab (Sutlej) and Chornak (or Sumnak). This is an interesting place from the view-point of an explorer and a geographer. Hardly 300 yards up the confluence of the Sutlej and the Chornak is the confluence of Langchen Tsangpo coming from the Indian borders, flowing northwards and the Tirthapuri tsangpo coming from Rakshas Tal via Dulchu and Tirthapuri Gompa, flowing in a south-westerly direction. The bed of Langchen Tsangpo is broad and majestic and carries under normal conditions nearly twice as much water as Tirthapuri tsangpo, which is like a brook. On being asked why the Langchen Tsangpo was so named, my guide said that at their confluence Tirthapuri appears like a child entering into the lap of the mother Langchen Tsangpo, that it carries much less water than the Langchen, that the Langchen is the biggest head-stream of the Sutlej though the traditional source is at Dulchu, which is

meant for religious purposes, and that the river is called Langchen Tsangpo or Langchen Khambab after its confluence with the Tirthapuri branch.

Situated at the confluence of the Chornak and the Langchen Tsangpo or Langchen Khambab is the site of the ruined village of Palkya, destroyed by Zoravar Singh in 1841. The foundations of the monastery and some Ladakhi type of *chhortens* and a water-mill still stand there to remind one of the past glory of the place. There are some ruined columns of buildings on the surrounding mountains said to be the old royal mansions of the Kings and *Zongs* of Kardung.

Coming back to the Langchen Tsangpo itself, the four rivers Chhu-Nak, Guni-yankti, Darma-yankti and the Gyanima chhu join together to form Langchen Tsangpo. The Chhu-Nak and the Gyanima branch carry much less water than the other two. The Guni-yankti (called Chhu-Minjung—small river, in Tibetan) and the Darma-yankti (Chhu-Minjen—big river) taken individually also, carry more water than either the Tag tsangpo where it falls into the Manasarovar, or the Tirthapuri tsangpo where it falls into the Langchen Tsangpo.

Of the two rivers the Darma-yankti and the Guni-yankti, the former carries more water than the latter. So, should the quantity of water be taken into account, the source of Darma-yankti should be the source of the Sutlej, which is in the Zaskar Range near the Darma pass. Also because of the fact that the Darma-yankti, coming from the Indian borders, is by Tibetans called Langchen Tsangpo after it receives the Chhu-Nak, the Guni-yankti, and the Gyanima chhu and of the fact that the name Langchen Tsangpo is applied full-fledgedly

to the river only and even after the meeting of the Tirthapuri tsangpo but not to the Tirthapuri tsangpo, it is quite evident that the Tibetans believe the Darma-yankti (or the Langchen Tsangpo) to be the main river Langchen Tsangpo (Sutlej). From the view-point of quantity of water, the Tirthapuri tsangpo is a mere tributary, though held sacred from the religious point of view.

Even according to Sven Hedin, the Langchen Tsangpo carried 2,943 cubic feet of water per second, whereas the Tirthapuri branch (Sutlej) carried 3,009 cubic feet of water in the year 1908. In other words, the Langchen carried 66 cubic feet less than the Tirthapuri branch. Even this small difference of 66 cubic feet is due to the facts, that Sven Hedin measured the water in the Chukta, Goyak, Trokpo-shar, and Trokpo-nup just after heavy rains, when they were in high floods, whereas the water in the Sutlej, down the Langchen Tsangpo was measured on a clear day in autumn. Had all the above-mentioned streams been measured under the same circumstances, certainly, even in the year 1908 Sven Hedin would have found the Langchen Tsangpo carrying more water than the Tirthapuri branch. Could I get even the slightest help from any geographical society or from the Survey of India office, I would have easily measured the volume of water simultaneously in all the streams (the Langchen Tsangpo and its affluents Darma-yankti, Guni-yankti, and Chhu-Naku; and the Tirthapuri branch including its affluents Chukta, Goyak, Trokpo-shar, and Trokpo-nup) on any particular day and would have shown that the Langchen carries more water than the Tirthapuri branch. Surely, Sven Hedin was fully conscious of

this fact, for later on he remarks that, "undoubtedly the Darma-yankti carries at certain times more water than the branch of Tirthapuri." So far as I have seen on six occasions and so far as my information collected from local Tibetans goes, the Langchen Tsangpo carries more water than the Tirthapuri branch. Hundreds of Bhotia merchants of Johar and Khampas going to Gyamima Mandi, Tirthapuri, and Gartok every year cross these rivers Guni-yankti, Darma-yankti, and the Tirthapuri branch, and they all testify to this effect. The streams which go to form the Langchen Tsangpo, especially the Darma-yankti and the Guni-yankti receive large quantities of water from the monsoon in rainy season and from glaciers all the year round, whereas the northern tributaries of the Tirthapuri river receive less water from these sources. Sven Hedin himself says, "*Samtang Rangdol* (his Tibetan guide) affirmed that this river (Haltshor-chu or Langchen Tsangpo of Survey maps) had as large a volume of water as the *Sutlej* itself, and therefore was held by some to be the present headwater of the *Sutlej*." ¹

When Henry Strachey suggests that the source of the river Darma-yankti may be the source of the *Sutlej*, Sven Hedin disposes of the matter summarily by saying, "Shortly after, in the autumn of 1846, Henry Strachey accomplished his well-known journey to the frequently discussed lake district, turning his steps first to the Raksas-tal, which was less known, and which seemed to him more interesting, because the *Sutlej* ran out of its north-western corner. His examination convinced him that no visible water-course left the lake and that

¹ 'Trans-Himalaya', Vol. III, pp. 241, 242.

the only outlet he could find was through the permeable ground. But he did not deny that abundant precipitation might raise the surface of the lakes to such a degree that the surplus water might flow away through the bed still visible in the north-west. He also puts the question whether the Darma-yankti, a tributary coming from the south and joining the Sutlej of Tirthapuri may not be the true source of the Sutlej. The decision, however, he left for exact measurements. *Undoubtedly, the Darma-yankti carries at certain times more water than the branch of Tirthapuri.*"¹ Sven Hedin passed by this road only once and at that time measured the water of the various tributaries of the Sutlej under different circumstances and conditions, which supported his view, and even then the Tirthapuri branch carried only 66 cubic feet of water more than the Langchen Tsangpo. So it is evident, he would not rely on Tibetans for accurate information; how could he then say with any certainty, "*Undoubtedly the Darma-yankti carries at certain times more water than the branch of Tirthapuri.*"? Evidently Sven Hedin was fully aware of the fact that he took the measurements of water in the different streams under different circumstances. This shirking of the truth on the part of Sven Hedin is worth noting. No doubt Strachey left the decision for exact measurements. That is fair, and his statement was correct. Of course Sven Hedin gave the measurements; but they were taken under different conditions, and yet he disposes of Strachey's suggestion, holding his own observations to be quite correct and claiming for

1 'Trans-Himalaya', Vol. III, p. 221.

himself the credit of discovering the source of the Sutlej.

Sven Hedin writes, "Strachey observed the curious fact that some of the sources of the Sutlej and Karnali were situated very near each other and divided only by an almost level plain. One could walk in an hour from the one to the other without ascending or descending more than 500 feet."¹ The observations of Strachey are perfectly correct. The source of the Darma-yankti (the biggest of the head-streams of the Sutlej) is in the Darma pass and the glacier source of the Karnali is in the Lampiya pass. The Darma pass and the Lampiya pass are about three miles apart and hence the correctness of the statement of Strachey.

Sven Hedin continues, "*But if we are to move the source from one point to another according to the volume of either stream, we may as well give up the problem as unsolvable. Reckoned from the source of the Tage-tsangpo the Tirthapuri branch is the longest.*"²

"But adhering to Colonel Barrard's definition, the Darma-yankti is not the longest branch of the headwaters of the Sutlej, for from its source to the junction it is, as the crow flies, only 43 miles long, whereas the length, from the source of the Tage-tsangpo to the junction, as the crow flies, and including the lakes is 93 miles."³ Sven Hedin further says, "*This is not the place to discuss the definition of a source.* Professor Supan shows that no general law can answer the question: where is the source?"⁴ But

¹ 'Southern Tibet', Vol. II. p. 75.

² 'Trans-Himalaya', Vol. III. p. 221.

³ 'Southern Tibet', Vol. II. p. 138.

⁴ *Op. cit.*, p. 139.

then I ask : why should there be such a divergent criteria for these four rivers belonging to the same region, Manasarovar ? The sources of all these four rivers are only within a distance of 45 miles, as the crow flies, from the shores of the Manas. A little further he writes, " Which is the head river and which the tributary ? The Chu-kar or the Tirthapuri branch ? Then I should without hesitation decide : *the one, which so long as records exist, has been called Sutlej by the natives, must be regarded as the head river.*" ¹

Here he brings into consideration the length of the river and the local traditions and begs the question. But he completely overlooks both these points without any heed in the case of Brahmaputra, where he lays the whole stress only on the quantity of water. " Some writers define the source of the river as the point of its source, that is most remote from its mouth. Colonel George Strahan has shown that if this definition be applied to the Ganges, its source will not be Himalayan at all but will lie near Mhow in Central India at the head of the Chambal." ² If the quantity of water is taken into account, the source of the famous Holy Ganges cannot be placed at Gaumukh, but should be located at the Niti or the Mana pass inasmuch as the Alakananda, which takes its rise there is twice as big as the Bhagirathi (which comes from Gaumukh) at Devaprayag where these two rivers meet.

Here is the observation of Dr. Longstaff which bears out the contention that the Darma-yankti should be regarded as the true source of the Sutlej, should the

¹ *Op. cit.*, p. 140.

² Barrard and Heyden, *op. cit.*, p. 184.

quantity of water be the criterion. "On the way we forded the Darma-yankti, Guni-yankti, and the Chhu-Naku, all rapid glacier streams with only slightly sunken beds. The former is undoubtedly, as Sir Henry Strachey suggested in 1846, the longest branch of the head-waters of the Sutlej; while the three streams which combine to form Chu-kar (Langchen Tsangpo of Survey maps and Haltshor-chu of Sven Hedin) must carry a greater volume of water than the Sutlej where I forded at Tirthapuri."¹

It is an interesting study to go through Moorcroft's map of Manasarovar and Rakshas Tal (1802). Two head-streams of Sutlej are shown, one starting from Rakshas Tal and the other Tirthapuri R. He must have heard of the river Tirthapuri river meeting the Langchen Tsangpo a few miles down Tirthapuri; and he might have also heard that the river Sutlej or Langchen Khambab takes its rise from Rakshas Tal and that both are the head-streams of the Sutlej and go by the name Langchen. He did not actually see these two rivers, so he combined these two ideas into one and made the Langchen start from the Rakshas and placed its confluence between Tirthapuri and the hot springs of Khyunglung.

When I had a talk with the *goba* of Tarchhen about the findings of Sven Hedin regarding the sources of Tibetan rivers, he argued with me as follow: "The Trokpo-shar, which joins the Sutlej about six miles up Tirthapuri monastery is much bigger than the Sutlej itself which comes from Dulchu, as the Trokpo-shar brings large quantity of glacial water. So, why not

¹ T. G. Longstaff, M.A., M.D., 'Geographical Journal', February 1907, p. 208.

place the source of the Sutlej in the Kailas Range, wherefrom the Trokpo-shar takes its rise? " Logically speaking the *goba's* suggestion also is certainly worth noting; for according to Sven Hedin's calculation, the stream Trokpo-shar carried 953 cubic feet of water per second, whereas the Dulchu branch carried only 661 cubic feet of water in the year 1908.

In fixing the source of the Brahmaputra, Sven Hedin gives preference to the Kubi tsangpo over the Chema-yungdung, as the Kubi is three and a half times as large as the Chema; but in the case of Sutlej he pays no heed whatever, even though the affluent Chukta is 50 times as large as the source stream of the Sutlej. Let Sven Hedin speak for himself. " The affluent Chukta falls through a gap in the erosion terrace and divides into five delta arms with thick greyish-brown foaming water above the gravelly ground. The fifth arm of this river, which rises in the Trans-Himalaya, was 58 yards broad and discharged 530 cubic feet per second. *It was, indeed, about fifty times as large as the source-stream of the Sutlej*, but the latter flows all the year round, whereas the Chukta swells up after rain but fails altogether in the cold of winter."¹

Though the Chukta is fifty times as large as the stream of the Sutlej coming from the springs at Dulchu, Sven Hedin gives preference to the latter on the ground that the former might become dry in winter, while the latter carries the spring water from Dulchu all the year round. If the flow of water throughout the year is a necessary condition how could Sven Hedin say that the Sutlej is coming from Rakshas Tal or Manasarovar though the channel from Dulchu to Rakshas

1 'Trans-Himalaya', Vol. III, p. 184.

Tal (a distance of two days' march) and the connecting channel from Manasarovar to Rakshas Tal are dry all the year round, according to his own observations or at least for the major part of the year according to the observations of his predecessors? Even the flow from the springs at Dulchu and Senge Khambab is only for a short distance, at the most for two furlongs or even less. Hence the flow of water all the year round from the spring-sources, should not and could not be brought in as an argument in the case of the rivers of these regions.

If argued from the similarity of names even then the conclusion is irresistible that the Langchen Tsangpo (Haltshor-chu of Sven Hedin) should be the principal head-water of the Sutlej, which we have already discussed. Nyanri Gompa (the western monastery of Kailas), situated on the right bank of Lha chhu, contains two big elephant tusks, which are each 20 inches in circumference at their thicker ends and 54 inches long, and there is the famous cave called 'Langchen-phuk' (elephant-cave) near the monastery. Similarly, the Zuthul-phuk Gompa (eastern monastery of Kailas), situated on the right bank of the Zhong chhu (the eastern tributary of the Lha chhu) contains two elephant tusks, smaller than those in the Nyanri Gompa. So why not the source of the Lha chhu in the Lhe la or Tsethi la be considered the genetic source of the Sutlej, in view of the fact that the Lha chhu carries greater quantity of water where it enters the Langak Tso than the Tag where it falls into the Tso Mavang, and in view of the fact that even in this case the traditional source remains intact at Dulchu Gompa?

According to Sven Hedin, the Lha chhu carried 280 cubic feet of water per second, a few miles up Nyanri gampa, in the year 1907. The Zhong chhu, which joins the Lha chhu is almost equally big. So the combined river along with the affluents Tarchhen chhu and Karleb chhu certainly carry over 600 cubic feet of water per second, by the time it enters the Langak Tso; whereas the Tag tsangpo brings only 397 cubic feet of water into the Manasarovar.

Sven Hedin left no stone unturned, rightly or wrongly, by all means, to assert and claim that he was the first white man to discover the sources of the three great Himalayan rivers under discussion. To support his views, in the case of Indus, he calls the small stream Bokhar chhu as Bokhar tsangpo (big river), which is not considered to be a tsangpo by the local people; in the case of Brahmaputra he calls the Kubi, a 'tsangpo'; and makes the Chema-yung-dung, a 'chhu,' (which also is called tsangpo after the Angsi chhu joins it); and in the case of Langchen Tsangpo (Darma-yankti), which is in fact a big river he reduces it to an ordinary stream 'Haltshor-chu'. He does not even mention the name 'Langchen Tsangpo' lest the very name should go against his findings and be proposed by some one as the Sutlej, on the likeness of the name 'Langchen' and the bigness of the river 'Tsangpo.'

Sven Hedin did, no doubt, more exploration work in the unknown Tibet than many of his predecessors. But that is no argument why we should accept his findings about the sources of the rivers under discussion as final and correct, especially when we see quite a number of reasons against these.

I do not mean to say that the Rakshas Tal, the Manasarovar and the Tag are not in the catchment area of the Sutlej basin; certainly they are. My only contention is that, should the quantity of water be the criterion for deciding the source of a river, certainly the source of the Sutlej cannot be placed in the Kanglung kangri but should be placed at the head of the Darma-yankti, Trokpo-shar, Chukta, or Lha chhu as the case may be. As Sven Hedin argues, should the name of the spring Langchen Khambab on the Tag be a proof that in olden days the source of the Langchen was supposed to lie to the east of Manasarovar, even on that hypothesis, the Langchen Tsangpo, the principal head-stream of which is Darma-yankti, must carry greater weight so as to deduce that the Langchen Tsangpo is the main head-stream of the Langchen Khambab and consequently that the actual source is near the Darma pass.

GANGA CHHU, THE OUTLET OF MANASAROVAR INTO RAKSHAS TAL

Manasarovar and Rakshas Tal might have been one continuous lake once and the range of hills now separating the two lakes might be due to a subsequent upheaval, the Ganga Chhu forming the outlet of Manasarovar into Rakshas Tal. This outlet is 40 to 100 feet in breadth, 2 to 4 feet in depth, generally during the rainy season, and nearly 6 miles in length in its meandering course. I took 25 rounds of Manasarovar (out of which one was done in two days during winter) and found the Ganga Chhu to be the only outlet of the Lake. So the statement and belief of several people

who had never undertaken even one full circuit of Manasarovar that the Brahmaputra takes its rise from Manasarovar on its eastern bank is absolutely groundless and untrue like the statements that the Indus has its source at the northern foot of Kailas Peak and flows by its western side.

Tibetan Mythology of the Ganga Chhu: There goes a story in Tibetan scriptures about the Rakshas Tal and the Ganga Chhu, the outlet of the Manas into the Rakshas. Rakshas Tal was originally the abode of demons; as such nobody drank water out of it. Two golden fish that were in the Manas fought against each other and one pursued the other into Rakshas Tal. The course which the golden fish took then is the present course of the Ganga Chhu. When the holy waters of the Manas flowed out through the course of the golden fish into Rakshas Tal, the latter became sanctified. From that time onwards people began to drink the water of Rakshas Tal.

"Year after year, pilgrims have wandered round the lake for the purification of their souls and in hope of attaining to the paradise of Brahma and the heaven of Siva. But they have taken their experiences with them when they entered on the dark road beyond the pyre on the quay at Benares, and their knowledge has vanished in the ocean of oblivion just as thoroughly as their ashes have been borne down by the eddies of the Ganges to the Bay of Bengal, and been there lost in the briny deep. Oh, if we possessed a chronicle of all that they have seen every year for many centuries! They have trodden out paths on the margin of the shore with their pious feet. For thousands of years Siva's guests have performed the round dance which

was to lead them to an imaginary heaven. If only one devotee each year had recorded what he saw on a stone tablet in a pagoda ! " 1

Thus remarked Dr. Sven Hedin very pertinently. So I give below in a tabular form the details of the flow of water in the Ganga Chhu during different years, with the hope that the information would be of some use to future explorers and geographers. When Sven Hedin visited Manasarovar he found that " the highest point of Ganga Chhu lying more than $6\frac{1}{2}$ feet above the level of Manasarovar and the bed of the Ganga Chhu to be dry."

At the starting point of the Ganga Chhu, sometimes it is being separated from the Lake by a narrow and loose embankment of pebbles and sand which are cast up by the waves and by the pressure of ice in winter. All the same, there is flow of water into the Ganga Chhu due to the infiltration of the Lake-water through the loose shingles. I had seen such shingle-banks at the mouths of the rivers Dam chhu and Gyuma chhu, damming the entire breadth of the estuary, even when there was a rapid flow of water in them, having a depth of four feet. Evidently the water in the rivers is percolating into the Lakes through these shingles which could be easily and clearly seen when the water in the rivers is muddy. The percolation of water through these shingles was so profuse and the shingles so loose that I could not cross the estuary, over them, for at the very start I went down into the shingle, right up to thighs. So, the mere presence of the shingles at the mouth of the streams,

1 Sven Hedin, 'Trans-Himalaya', Vol. III, p. 206.

apparently separating the Lake from the rivers do not necessarily mean that there is no flow of water from the rivers into the Lake. So also, even when there is no apparent flow of water from the Manas into the Ganga Chhu, sometimes due to high shingle-banks there is subterranean flow through them, which is evident from the fact that there is plenty of water in the lower course of the Ganga Chhu, a mile away from the Manas. No doubt the water from the hot springs near the Chiu hill flows into the Ganga Chhu, but it is very small in comparison with the quantity of water in the lower course of the Ganga Chhu. The formation of embankments of shingles at the mouths is a common occurrence in the case of most of the streams entering into Manasarovar and Rakshas Tal.

I closely followed the six-mile long winding course of the Ganga Chhu along its left bank from the Rakshas Tal right up to the Manasarovar on April 14, 1937, and I found ice and snow throughout the bed of the Ganga Chhu although at several places regular slow flow of water towards the Rakshas Tal was seen. The water was very muddy where the Ganga Chhu was flowing into the Rakshas Tal. I had enquired from some elderly Indian traders who annually go to Tarchhen Mandi (Kailas) from Darma (Northern Almora); but none could tell me of any year in which they did not wade the Ganga Chhu and in which the bed of the Ganga Chhu was completely dry.

Dr. Kashyap writes that the Ganga Chhu is 3 miles in length, but it is nearly 6 miles. This statement of Dr. Kashyap is due to the fact that he did not actually travel the whole course of the Ganga Chhu.

The stream of water $1\frac{1}{2}$ feet deep was frozen *en bloc* in the bed of the Ganga Chhu, in the year 1936. But near the hot springs (about 2 furlongs from Manasarovar) there was flowing water 6 inches deep. There are three hot springs on the Ganga Chhu about two furlongs from Manasarovar down the Chiu hill. One spring is on the right bank, one on the left bank (with a *kund* to take bath), and one boiling spring on a small rock in the middle of the Ganga Chhu, having temperatures of 115° , 135° , and 170° F. respectively. There are some in the bed of the Manasarovar, especially $\frac{3}{4}$ of a mile south of the beginning of the Ganga Chhu.

No doubt the water from the hot springs flows out into the Ganga Chhu, but it is a small quantity in comparison with the quantity of water flowing in the lower course of the Ganga Chhu. So the flow of water in the Ganga Chhu, say half a mile or a mile from Manasarovar, even when there is seemingly no external flow of water from the Manas, is not simply the water of the hot springs, but from the subterranean flow from the Manas into the Ganga Chhu.

During the winters of 1945-46, '46-47, and '47-48 there had been exceptionally very low snowfall in Kailas-Manas Region; so much so that the level of the water in the Manas had fallen down by some feet and the lake Gouri-kund on the Kailas-*parikrama*, had been completely cleared of ice for the first time in its history. So it is no wonder that the water in the Manas did not flow out through the Ganga Chhu in the beginning, though there was flow of water in it a mile down Chiu Gomba.

Table giving a Report on the Flow of water from Manasarovar into the Ganga Chhu and from Rakshas Tal into the Sullej, based on Dr. Sven Hedin's 'Southern Tibet', Vol. II, p. 183.

+ signifies outflow ; - signifies no flow

Year	From Manasarovar	From Rakshas Tal	Source of Information
1590	+	+	Tieffenthaler's information from a Hindu pilgrim
1625	+	+	..
1711	+	+	Chinese originals from Gaubil's map
1715	+	+	Desideri
1717	+	+	Lama-map by D' Anville
1762	+	+	Chi Cho Nah's information
1760-65	+	+	..
1770	+	?	Purangir
1770-80	+	?	Puranpuri
1796	+	?	Harballabh
1798	+	-	Gerard's information
1804	+	-	Moorcroft's information
1812	—	-	Moorcroft
1816	—	-	Capt. Webb's information
1817-18	—	?	Alexander Gerard's information
1819	+	?	Herbert's information
1843	—	-	Cunningham's information
1846	+	-	H. Strachey
1848	+	-	R. Strachey
1849	+	-	..
1865	—	-	Capt. Smith
1868	—	-	Montgomery's pundits
1900	—	-	Kawaguchi's information
1904	?	-	Hyder's information
1905	—	-	Sherring
1907	—	-	Sven Hedin
1908	—	-	Sven Hedin
1909	+	+	A Ladakhi merchant
1910	+	+	A Ladakhi merchant
1911	+	+	A Ladakhi merchant
1928	+	+	Swami Pranavananda
1930	+	+	Swami Pranavananda
1942	+	+	Swami Pranavananda

Report on the Flow of water in the Ganga Chhu

Date of Crossing	Depth in Inches	How is the Flow	Place of crossing the Ganga	Is there direct flow from Manas or not ?	How is the Rainy Season ?
Sept. 1912	18	Rapid	$\frac{1}{2}$ m. down Chiu	Yes	..
" 1913	27	"	1 m. from Rakshas	..	..
" 1914	18	"	$\frac{1}{2}$ m. from Chiu	Yes	..
" 1915	27	"	$\frac{1}{2}$ m. from Rakshas	..	..
" 1922	22	"	1 m. from Manas	..	..
" 1925	20	"	1 m. from Manas	..	..
1926	25	"	1 m. from Manas	..	..
1927	27	"	2 m. from Rakshas	..	..
4.9. 1928	42	Very rapid	100 yds. from Manas	Yes	Very dry
14.8. 1929	29	Rapid	2 m. from Rakshas	"	Heavy rains
3.9. 1930	30	"	3 furlongs from Manas	"	Moderate
12.9. 1931	32	"	3 furlongs from Manas	"	"
27.8. 1932	30	"	2 m. from Rakshas	"	"
6.9. 1933	36	"	100 yds. from Manas	"	Heavy rains
30.8. 1934	30	"	3 furlongs from Manas	"	Moderate

Date of Crossing	Depth in Inches	How is the Flow	Place of crossing the Ganga	Is there direct Flow from Manas or not?	How is the Rainy Season?
21. 8.35	34	Slow	2 m. from Rakshas	Yes	Moderate
5. 9.36	27	Moderate	3 furlongs from Manas	"	"
28. 1.37	Water frozen	"	From Manas to $\frac{1}{2}$ m. downwards	"	"
2. 2.37	<i>en bloc</i>	"			
6. 2.37	18" thick	"			
13. 3.37					
18. 3.37					
14. 4.37	6 to 24	Slow	Whole length of Ganga Chhu	Yes	"
30. 4.37	6	"	Near the hot springs	"	"
20. 5.37	7	"	"	"	"
26. 6.37	10	"	"	"	"
12. 7.37	10	"	"	"	"
27. 7.37	16	Moderate	"	"	Moderate
20. 8.38	{ 36	Rapid	{ 100 yds. from Manas	"	Heavy rains
	{ 27	"	{ $\frac{1}{2}$ m. from Manas	"	"
26. 8.38	{ 42	Very rapid	{ 100 yds. from Manas	"	"
	{ 27	"	{ $\frac{1}{2}$ m. from Manas	"	"
20. 8.39	20	Moderate	2 m. from Rakshas	"	"
22. 8.40	9	Slow	Near hot springs	"	Dry
26. 9.40	6-9	"	Near Manas	"	"
1. 10.40	6	"	100 yds. from Manas	"	"
13. 7.41	6	"	Near hot springs	"	"
				{ For 100 yds. from Manas no flow	Moderate

For the years 1912-15, I got the information from devotees of Mayur-pankhi Baba. For the years 1922-26, I got the information in 1928 from a pony-man who had accompanied Kashyap and for the year 1927, I got the information from my Tibetan servant. For the years 1929-34, I collected the information from a person I had specially deputed for the purpose. During the years when I could not actually go to the starting-point of the Ganga Chhu, I had ascertained the information from the monks of the Chiu Gompa during the following year. The rest of the information in the table is from my own observation. Whenever I got the information from the Tibetans or Bhotias, they would show me their legs and point out up to what part the legs were under water, from which I measured out the depth in inches.

I crossed the Ganga Chhu 46 times. I propose depositing a few hundred rupees and some printed questionnaire papers, with the Darma Seva Sangha, so that the Sangha might, with the interest on this amount, send some one regularly to the Ganga Chhu and submit a report regarding the flow of water in it to the Royal Geographical Society, London or some other Geographical Society interested in it.

In the living memory of the Tibetans and the Bhotias I met, the level of the water in the Lake rose to the highest point in 1943. On August 31, when there was 40" deep water flowing in the Ganga Chhu, half a mile from the Manas, the distance between the Lake and the facade of the Thugolho Gompa was 26 feet. On 18th December, when there was 20" of water in the Ganga Chhu, 100 yards from the Manas, the distance was 40 feet. On September 14, 1948,

when there was no apparent flow of water from the Manas into the Ganga Chhu, the distance between the Lake and the facade of Thugolho Gompā was 71 feet. Cf. "The distance between the Lake and the monastery was 323 feet, from the front of the Convent facade (the right corner-looking from the strand) lay 20.67 feet above the level of the Lake on August 2, 1907."¹

OLD BED OF THE SUTLEJ

That part of the Sutlej where it is written on the Survey maps: 'old bed of the Sutlej', contained water and there was continuous flow from Rakshas Tal up to Lejandak which is a day's march. I noticed it in August 1928, in August 1935, and in October 1942.

I did a close round of the Rakshas Tal in 1942. The Sutlej flowed out of the north-west corner of Rakshas Tal where the river was so deep that I could not cross it on October 15; and I had to go a mile down to cross it, where it was much shallower. Just near the place wherefrom the Sutlej starts, in the bogs on its left bank there are several small springs welling out, the water from which flows into the Rakshas. So some people are under the wrong notion that the water in the Rakshas does not flow out through the Sutlej. But I have got information from local shepherds who camp in the bogs here, that oftentimes the lower course of the Sutlej (after a mile from the Tal) is blocked up, but the water of the Tal flows out through sub-terranean passages and re-appears at Loma-goma, a few miles further down. So the word 'old bed of

¹ Sven Hedin, 'Trans-Himalaya', Vol. III, p. 131.

the Sutlej ' should be deleted from the Survey maps, in view of the fact that there has been a continuous flow of water from the Manasarovar into the Rakshas Tal through the Ganga Chhu and from the Rakshas Tal into the now so-called ' old bed of the Sutlej '. Even taking for granted that the Ganga Chhu or the so-called ' old bed of the Sutlej ' becomes dry on some occasions, we cannot call that portion, from the Rakshas Tal to Lejandak, ' old bed of the Sutlej '. Moreover Sven Hedin himself writes, " Worthy of notice is the circumstance that according to the lamas of Tirthapuri the Sutlej came from Rakshas Tal..... Hence it seems that the monks trace back the Sutlej to Rakshas Tal, in spite of climatic variations which cause the water to fail periodically."

I do not know why and with what meaning and significance the Survey maps write ' old bed of the Sutlej ' from Rakshas Tal to Lejandak (in blue dashes) and ' dry channel ' from Lejandak to Dulchu (in black line) and yet keep the source of the Sutlej in the Kanglung glaciers. In all probability the Survey of India Office might have borrowed the nomenclature from Sven Hedin.

A rise in the level of the water of Manasarovar and the consequent flow of water into Rakshas Tal through the Ganga Chhu make the flow continuous into the now so-called ' Old bed of the Sutlej ' from the Rakshas Tal. The rise of water in the Manasarovar and the consequent overflow into the Rakshas Tal through the Ganga Chhu may be caused not only by heavy rains but also by melting snow due to bright sunny days.

GANGES-SUTLEJ CONFUSION

For several generations there has been a hopeless confusion of the rivers Ganges and Sutlej, which is mainly two-fold. Most of the Western as well as the Eastern explorers, surveyors, tourists, and pilgrims to the Manasarovar Lakes prior to Sven Hedin were under the wrong notion that the Ganges and the Sutlej took their rise from Manasarovar and Rakshas Tal, while some others have confounded the Ganges with the Sutlej or made one the tributary of the other.

Hindu *Puranas* describe the Ganges as descending from the Mount Kailas ; but the Hindus know definitely that the source of the Ganges is at Gaumukh. Isbrants Ides (1704) was informed by Jesuits in Peking, who in turn got the news from Chinese sources, that the Manasarovar and Rakshas Tal gave birth to the Ganges. Desideri (1715) describes the Ganges as taking its rise in the Kailas and Manasarovar and confuse it with the Sutlej, and he further says that the Kailas is the source of the Indus. Father Gaubil (1729) says that three head-streams of the Ganges flow into the Manasarovar, thence a stream pours out into the Rakshas Tal, leaves it again to run on westwards. Then again he makes the Sutlej and the Indus join together to form the Ganges.

D'Anville (1733) makes both Latchau (probably our Lha chhu) and Lanc tehau river (Langchen), the Ganga ; and Matchou (our Map chhu or Karnali) a tributary of the combined river of the above two, the Ganga ; or in other words he makes the Langchen Khambab (Sutlej) identical with the Ganges. Anquetil du Perron (1770?) entered into correspondence with

the Jesuit Father Joseph Tieffenthaler, who supplied him with maps, from which the former prepared maps. Anquetil makes the Sarayu flow out of the Rakshas Tal and the Brahmaputra out of Manas from its eastern shore, and the Sutlej out of its north-western shore; and later on says that the Sutlej joins the Alakananda, one of the head-streams of the Ganges; thus confuses the Sutlej with the Ganges.

Purangir, who accompanied Bogle and Turner to Tibet (1773) reports that the Ganges has its source on Kailas and from there it flows into the Manas and from the Manas it flows out again. At another place he says that "the Ganges issues from it (Manasarovar), and during the dry season its stream is hardly five or six inches deep." In fact this is our Ganga Chhu. Major J. Rennell (1782) describes the Ganges as running out of Manasarovar. Puranpuri (1792) narrates that the Ganges gushes out of the root of a birch tree situated on the summit of the Kailas Peak, that the Sutlej flows out of the Rakshas Tal and the Brahmaputra out of Manasarovar.¹

Captain F. Wilford (1800) writes that the Ganges is the only river that really issues from Manasarovar. The source of the Ganges was finally discovered to be at Gangotri (Gaumukh) in 1808 by Lieutenant Webb; yet Webber (1866) placed the source of the Ganges on the southern flank of Gurla Mandhata, which is on the south of Manasarovar. Ekai Kawaguchi, the Japanese Buddhist monk, who travelled through India and Tibet in 1897-1903, 'drank deep of the sacred water of the Ganga at the spring Chhumik-thungtol'

¹ Duncan, 'An Account of Two Fakirs', 'Asiatic Researches', for the year 1798.

on the south-eastern side of Manasarovar, and made the Sutlej a tributary of the Ganges ! Sir Thomas Holdich in his ' Handbook of Tibet ', (1904) remarks that the Indus has its source on the slopes of Kailas and places the source of the Sutlej on the southern flank. I need not mention the names of the several pious Hindu pilgrims, who still believe that the Ganges takes its rise from Manasarovar.

But up till now none, not even Sven Hedin, has explained satisfactorily why such a confusion was made repeatedly even by great explorers and writers. Certainly there must be some reason which has all along misled so many people into making such incorrect statements persistently. Even to-day many orthodox and religious-minded Hindus as well as the cultured Indians confound the channel Ganga Chhu (the outlet of Manasarovar into Rakshas Tal) with Ganga (River Ganges),¹ as the word ' Ganga ' is common in both and say that " like the Indus, the Brahmaputra, the Sarayu, and the Sutlej, the Ganges (the third biggest of the Himalayan rivers) also has its source in Manasarovar," though the Ganga Chhu has absolutely no connection whatsoever with the River Ganges. No doubt, one Captain F. Wilford was about to point out the root cause of all the confusion when he quoted the Tibetan scripture thus : " the four sacred rivers, springing from the Mansarovara according to the divines of Tibet, are the Brahma-putra, the Ganges, the Indus and the Sita. The Ganges is the only one that really issues from that lake, and if the

¹ ' Ganges ' is the corrupted English from the original Sanskrit word *Ganga*. *Ganga* is the common household term for ' Ganges ' throughout India.

three others do, it must be through subterranean channels; and such communications, whether real or imaginary are very common in the Puranas."¹ Evidently the Captain was citing the passage from the Tibetan *Kailas Purana*. But most unfortunately the passage was quoted wrongly in part for Indus and Sita are synonymous and there should have been Ganga in place of Ganges and Sindu in place of Sita.

Sven Hedin quotes from the explanation of the *Abhidharmakosha* that "there are to be found rocks or mountains with faces resembling an elephant, a garuda, a horse, a lion, and from them rise the following rivers: Ganga, Sindhu, Pakshu, and Sita."² So far as the names are concerned, they are identical with those given in the *Kangri Karchhak* excepting that there should be peacock in place of garuda and Sindu in place of Sindhu. The courses of the rivers have not been described in the commentary as in the *Karchhak*, for Ganga has been taken as Ganges, Sindu for Indus, and Pakshu and Sita have been taken for some other rivers, flowing north-west of Kailas. So, Sven Hedin could not solve the problem satisfactorily. Hence the mystery remains still a problem unsolved until our times for the unfoldment.

Sarat Chandra Das says that "the four Great Rivers Ganga, Lohita, Pakshu, and Sindhu, are described as issuing from rocks having the appearance respectively of an elephant, an eagle, a horse and a lion; according to others of a bull, a horse, a peacock

¹ Captain F. Wilford, quoted by Sven Hedin in his 'Trans-Himalaya', Vol. III, p. 200.

² Sven Hedin, 'Southern Tibet', Vol. I, p. 127.

and a lion."¹ But the courses of these rivers as described by him do not tally with those given in the *Kangri Karchhak*. While enumerating these rivers he mentions Lohita as one of the four, but in the explanation he does not mention that name; instead he gives Sita. Thus Sarat Chandra Das also makes a confusion of the names and courses of these rivers, as such his information also is of no help for the solution of our problem.

The real solution is very simple, provided one has a chance of having a glance into the *Kangri Karchhak*. Firstly, Ganga, Sindu, Pakshu or Vakshu, and Sita are the Indian names, as given by the *Kangri Karchhak* to the Langchen Khambab (Sutlej), the Mapcha Khambab (Karnali), the Tamchok Khambab (Brahmaputra), and the Senge Khambab (Indus), respectively. Secondly, Hardwar is called Chomo Ganga, Chhemo Ganga, or Chhembo Ganga after the river. In Tibetan language 'chomo' means a nun and 'chhemo' or 'chhembo' means big; so 'Chomo Ganga' means *Ganga-mayi* or Mother-Ganges and 'Chhemo Ganga' means big river Ganga (which for them is synonymous with the river Sutlej or Langchen Khambab). Thirdly, the Sutlej has been described as taking its source on the west of Manasarovar and flowing towards the west in Tibet and in India for some distance. It is further described as having taken a turn towards the east, flowing north of Buddha-Gaya and finally falling into the ocean on the east. It is on the support of these three points that Tibetans believe the Ganga Chhu and consequently the Sutlej

¹ Journal of the Asiatic Society of Bengal', Vol. LVI, Part I, No. 1, Calcutta, 1887.

The Four Great Rivers of the Holy Kailas and Manasarovar

No.	Tibetan Name	English Translation	Indian name according to <i>Kangri Karekha</i>	Present Indian Name	On which side of Manas it flows	Name and direction according to Buddha 'ghosha'
1	Langchen Khambab	River coming out of the mouth of an elephant	Ganga	Sutlej or Shatadru	West	Elephant-mouthed river on the South
2	Mapcha Khambab	River coming out of the mouth of a peacock	Sindu	Karnali (one of the head-streams of the Sarayu)	South	Bull-mouthed river on the North
3	Tamchok Khambab	River coming out of the mouth of a horse	Pakshu or Vakshu	Brahmaputra	East	Horse-mouthed river on the West
4	Senge Khambab	River coming out of the mouth of a lion	Sita	Indus or Sindhu	North	Lion-mouthed river on the East

¹ The Pali scholiast Buddhaghosha provides the Manasarovar situated in the enclosure of Kelasakuta, the Chitrakuta, and another Himalayan peak with four outlets called Simha-mukha (the Lion or East Face), Hathi-mukha (the Elephant or South Face), Asva-mukha (the Horse or West Face), and Usabha-mukha (the Bull or North Face).

to be the same as the Ganges at Hardwar. Or it is also just possible that based on this wrong and confounded understanding the above statements about the Sutlej have been recorded in the *Kangri Karchhak*. Anyway there is undoubtedly a confusion. So it is the word 'Ganga Chhu' which has misled the Indians and the early explorers and writers to believe that the Ganges had its source in the Manasarovar; and it is the Indian equivalent 'Ganga' for the Sutlej in the *Kangri Karchhak*, which has misled Tibetans to believe that the Ganges at Hardwar is the same as the Ganga Chhu and consequently the Sutlej. It is these wrong notions prevailing amongst the Indians and Tibetans that have to a great extent influenced and misled the various explorers, surveyors, travellers, pilgrims, and geographers up till now.

There is yet one more reason for the Ganges-Sutlej confusion. In the year 1624, Father Antonio Andrade had travelled to Chhabrang by the Mana pass beyond Badrinath. He speaks of two glacial lakelets or pools, Rakas-tal and Deb-tal. He further narrates that a stream gushes out of an ice cave or tunnel from Deb-tal, flows through Rakas-tal, and joins the Alakananda. This stream is the river Sarasvati, which falls into Alakananda, which is itself one of the head-streams of the river Ganges. The twin glacial lakelets of Rakas-tal and Deb-tal were mistaken by other Western explorers, geographers, and writers for the twin Lakes of the famous Manasarovar and Rakshas Tal. This has led to the confusion and wrong notion that Ganges takes rise from Manasarovar and Rakshas Tal. It was known to some explorers that the Sutlej takes its rise from Rakshas Tal. Thus arose the confusion

that the Ganges and the Sutlej take their rise from Manasarovar and Rakshas Tal and the consequent Ganges-Sutlej confusion. Based on this misconception and confusion it is conjectured that the Sutlej and the Ganges are identical or the one is the tributary of the other, due to the fact that only one river is seen flowing west of Rakshas Tal.

I fervently hope that this piece of useful information would throw a flood of light on the subject and give a death blow to the Ganges-Sutlej confusion which has been perpetuated for so many centuries. It may be noted in this connection that the distance between the actual source of the Ganges, which is at Gaumukh in Tehri Garhwal State, and Manasarovar is about 140 miles as the crow flies.

THE RIVERS THAT FALL INTO RAKSHAS TAL ON ITS NORTHERN SHORE

"The river which falls out in the middle of the northern shore of the Lake (Rakshas) is formed from the brooks of the valley on both sides of Kailas; one of its branches passes Parkha. When I crossed the river in July 28, 1908, it flowed in two branches, one having two or three cub.m., the other 15." In fact the three rivers of Kailas—the Lha chhu, the Tarchhen chhu, and the Zhong chhu along with the Karleb form one river; and the Avang chhu, Philung-kongma Philung-pharma, and Philung-yongma form the Dam chhu, the bed of which is very marshy and is altogether a different river. It is this river that flows by the

side of Parkha. Sven Hedin shows only one river in his map, though these two are two different rivers falling into the Rakshas Tal, at two different places $1\frac{1}{2}$ miles apart. Sometimes, a small brook branches off from the Zhong chhu and joins the Dam chhu.

CHAPTER III

SOURCE OF THE INDUS

Regarding the source of the Indus, Sven Hedin writes, "Our camping ground on the bank of the Indus (16,663 feet) is called Singi-buk. Eastwards the valley is broad and open but the Indus itself is here an insignificant stream. I was therefore not astonished when I heard that it is only a short day's journey to the source, which, I was told, does not proceed from snow or a glacier, but springs up out of the ground. The men called the river the Singi-tsangpo, or Singi-kamba, and the source itself Singi-kabab."¹

"A little later we camp at the aperture of the spring, which is so well concealed that it might easily be overlooked without a guide."²

"At this point, the situation which had been discussed and searched for during some 2,000 years, the famous Singi-kamba or Indus is born. *But the infant river which is a mere brook, is much shorter than both the Lungdep and the Munjam.* Continuing north-eastwards one still remains for a considerable distance within the drainage area of the Indus, for in fact and strictly hydrographically the Singi-kamba is only a right or northern tributary to the *Bokhar-tsangpo, which, itself, is only a very insignificant brook. Compared with the latter, both*

¹ 'Trans-Himalaya', Vol. II, p. 210.

² *Op. cit.*, p. 212.

Lungdep and Munjam have a greater quantity of water and may be somewhat larger than the Bokhar, though all of them are very short. From a hydrographic point of view it may be said to be a matter of taste which of these different brooks should be regarded as the principal source of the Indus. The question is of no great consequence, for, whichever branch should be chosen, its source is situated at a short day's march from the Singi-kabab. The problem cannot be settled in any more satisfactory way than to accept the Tibetan view and regard the Singi-kabab as the source of the Indus, in spite of its being the shortest and one of the smallest of the several source branches. Any attempt to persuade the Tibetans that the Singi-kabab were not the real source would fail, for it has tradition in its favour, is a sacred place adorned with mani pyramids and prayer stones, and it is one of the four famous kababs."¹

Where and how does the question of persuading the Tibetans not to believe the Senge Khambab to be the real source of the Indus arise? Should explorers and geographers also go on a propaganda campaign to persuade people to believe or not to believe certain findings of theirs? What persuasion or cajoling did Sven Hedin do to make the Tibetans believe that the Chama-yungdung is not the real source of the Brahmaputra and that the Kubi is the real one?

"The velocity of the Singi-kampa was twice as great as that of the Gartong-chu. The volume of the Singi-kampa was 9.28 cubic metres per second, that of the Gartong-chu 6.67.....Having decided that

1 "Southern Tibet", Vol. II, p. 213.

the Singi-kampa must be regarded as issuing from the true source of the Indus, Sven Hedin, followed this main branch of the river to its origin in the Trans-Himalaya. The first branch junction that he reached was that of Lungdep-chu; he found that there was a greater volume of water in the Lungdep-chu than in the Singi itself, and he was inclined to regard it as the source of the Indus, but as it was held by the local Tibetans to be a tributary only, he accepted their view, and persevered in climbing the rocky bed of the Singi. The volume of water in the next tributary the Munjam flowing into the Singi-kampa was very small (one-third of a cubic metre), and Sven Hedin continued his climb to the particular source, which the Tibetans called the source of the Singi-kampa. The source is known as the Singi-kabab, 'the Lion's mouth' and is 16,941 feet high."¹

Instead of first measuring the velocity of the two rivers, the Senge² Khambab and the Gartong chhu, at their confluence, and then going up the Senge Khambab to find out the sources of the Indus, as described to us by Burrard, Sven Hedin first fixed the source of the Indus in the Senge Khambab springs and then went down to measure the velocity of the water in the Gartong chhu. It was an accidental coincidence that the Senge Khambab carried more water than the Gartong at that time. Even if he had found Gartong chhu carrying more water, as it does oftentimes, Sven Hedin would certainly not have shifted his source from the Senge Khambab. Even taking for granted for a moment that Sven Hedin measured at first the

¹ Burrard and Hayden, *op. cit.*, p. 241.

² Also pronounced 'Sengi' or 'Singi'.

velocities of the two rivers at the confluence and found the Senge Khambab carrying greater quantity of water than the Gartong and then went up the Senge Khambab to trace the source of the Indus, why should he miserably fail to apply this very "theory of greater quantity of water" only after a few days' march, and jump at the "tradition theory" when he reached the very first branch junction namely, the Lungdhep? But the great explorer completely overlooked the traditions of the local Tibetans when he went to fix the source of the Brahmaputra!

Both the Lungdhep chhu and the Munjan chhu which flow into the Senge, and the Bokhar chhu into which the tiny brook of the Senge Khambab springs flows are all decidedly several times bigger than the little brook formed by the springs of the Senge Khambab. In spite of that Sven Hedin is liberal enough to give over-weightage to the Tibetan traditions for "the problem cannot be settled,....." The fact is, Sven Hedin could not spare more time for exploration in the circumstances under which he had to labour due to the restrictions which the Tibetan Government had put upon his movements.*

Of the different source streams of the Indus—the Tsethi chhu, the Lungdhep chhu, the Munjan chhu, and the Bokhar chhu, the Lungdhep chhu carries most water and is the longest of all. I went to the source of the Indus by the Lhe la and returned by the Topchen la; therefore I did not see personally the Tsethi chhu, but my guide informed me that the Lungdhep chhu is bigger than the Tsethi chhu. Next come the Munjan and the Bokhar chhu, both of which appeared to be almost of the

same size; some shepherds held the Bokhar to be bigger than the Munjan, and my guide said that the Munjan was bigger than the Bokhar, but I am not definite about it. Anyway, the Lungdhep chhu is certainly the biggest and the longest, and as such its source, which is in the Topchhen la, should be considered the source of the Indus if the quantity of water or length is taken as criterion for fixing its source. The statement of some writers that the Indus takes its rise from the northern foot of the Kailas Peak is absolutely wrong.

In spite of the overwhelming evidence to the contrary, Sven Hedin seeks to show that the credit of having discovered the sources of the Indus, Brahma-putra, and Sutlej goes to him as could be seen from the following passages.

"But no pundit had succeeded in penetrating to the source, and the one who had advanced nearest to it, namely, to a point 30 miles from it, had been attacked by robbers and forced to turn back. Consequently, until our time the erroneous opinion prevailed that the Indus had its source on the north flank of Kailas, and, thanks to those admirable robbers, the discovery of the Indus source was reserved for me and my five Ladakis.

".....and I revelled in the consciousness that, except the Tibetans themselves, no other human beings but myself had penetrated to this spot. Great obstacles had been placed in my way, but Providence had secured for me the triumph of reaching the actual sources of the Brahmaputra and Indus, and ascertaining the origin of these two historical rivers..... Not without pride, but still with a feeling of humble

thankfulness, I stood there, conscious that I was the first white man who had ever penetrated to the sources of the Indus and Brahmaputra." ¹ "I loved this stream (Sutlej), for no white man had ever seen its source before me." ²

Had Sven Hedin gone to the confluence of the Gartong and the Senge in summer, before visiting the Senge Khambab, he would have certainly found the water in the former to be greater than in the latter and would have fixed the source of the Indus at the head of the Gartong according to the quantity of water and he would never have cared either for the Senge Khambab or the Tibetan traditions and sentiments. Certainly the Gartong carries more water than the Senge itself. This is the confirmed opinion of all the shepherds and local Tibetans whom I came across. It may be under extraordinary circumstances that the Senge carries more water than the Gartong. However, he found the water in the Senge to be greater than in the Gartong when he went there in early winter, though I have got my own doubts about it, from the quotation I herein give. "Accordingly the Singikamba, the Lion river is not only the longer but also the more voluminous of the two head-streams, and the problem is solved. *Certainly it may be suggested that the dimensions given above only apply to late autumn and winter, for in summer and especially during the rainy season very different conditions may prevail. No doubt this is the case.* The rainfall diminishes north-eastwards, and therefore more rain falls in the basin of the Gartong than in that of the

¹ 'Trans-Himalaya', Vol. II, pp. 212-14.

² *Op. cit.*, Vol. III, pp. 244, 245.

Singi-kamba, which may be robbed of moisture by the Trans-Himalaya. The spring flood consequent on the melting of snow is also greater in the Gartong. How often irregularities must occur in consequence of the direction of the wind and capricious variations of temperature! *In the meantime we may consider it probable that the Gartong carries during the whole year more water than the Singi-kamba, but we have at least discovered that the Singi-kamba is a large stream, when no disturbing influences are at work, when there is no precipitation, and when the temperature in the two river basins may be considered identical.*"¹ The conditions mentioned in this passage are very rarely fulfilled.

Moorcroft placed the source of the Indus here at the head of the Langpochhe, for he must have heard from the local Tibetans that this branch was bigger than Senge branch and hence the main stream of the river ; at least he must have heard that Langpochhe was the Indus.

Alexander Cunningham (1854) obtained information from different people that ' the Garo (Gartok) is the Singgee-chhu or Indus and that there is no great eastern branch.' From all these it might be noted that the local Tibetans knew the Gartong to be bigger than the Senge branch, though they place the traditional source in the Senge Khambab springs.

So should the quantity of water be taken into consideration, the Gartong would be the chief head-stream, which might thoroughly be investigated and verified by future explorers. The genetic source of

¹ ' Trans-Himalaya ', Vol. III, pp. 45, 46.

the Gartong is at the head of the Langpochhe chhu, which I had visited on September 19, 1928. But if the Tibetan traditions are taken into account the source of the Indus would be in the springs of Senge Khambab only.

The confusion of the Indus with the Sutlej (Langchen Khambab or Elephant-mouthed river) by several explorers in the past is due to the fact that the uppermost head-stream of the river Gartong (which is itself one of the head-waters of the Indus) is called Langpochhe chhu (Elephant-river), which conveys the same meaning as the Langchen. For a Tibetan the words Langchen (the actual Sutlej), Langpochhe, and Ganga are synonymous.

CHAPTER IV

SOURCE OF THE KARNALI

After two days' march, 22 miles from Taklakot up the Karnali, the fourth of the series of the four great rivers of the Holy Manasarovar, I reached a place called Mapcha-Chungo on the right bank of the river. On the right side of the road, situated on the edge of the bank is a big *mani*-wall with several *mani*-slabs and streamers. Getting down a few yards towards the bed of the river is the big spring of Mapcha-Chungo (peacock-head) gushing out from the perpendicular wall of the steep bank of the river. I visited this place on September 9, 1928, on August 23, 1936, in 1943, and in 1946. There are some *mani*-stones and a few streamers near the spring. The water gushing out of the spring flows down over a beautiful green velvet mossy dome-like mound, down into the Karnali below. The moss over which the spring flows down has some resemblance to the colour of the neck of a peacock; hence the name Mapcha-Chungo. This spring is the traditional source of the Map chhu or Mapcha Khambab (peacock-mouthed river or Karnali) and as such the actual or genetic source of the Map chhu or Karnali is near the Lampiya pass, wherefrom the main stream of the Karnali comes.

Some explorers have placed the source of the Karnali in the Rakshas Tal, because one of its head-streams, the Gurla chhu, has its source in the glaciers on the north-western slopes of the Gurla Mandhata peaks, south-east of Gurla pass. This

Gurla chhu flows into the Karnali, about a mile down the village Kardung. Those who go to Kailas by the Lipu Lekh pass and Taklakot, cross this stream at the southern foot of the Gurla pass. There is another small stream, called Lang chhu which has got its source on the south-eastern side of the Gurla pass (not very far from where Gurla chhu takes its rise) but flows to the northern side of the Gurla pass into Rakshas Tal. The Gurla chhu is a big stream whereas the other stream is a very small one. Those who did not trace the course of the two streams closely, confounded both and placed the source of the Karnali (Mapcha Khambab) either in Rakshas Tal or in the Gurla Mandhata. The Gurla chhu is much smaller than the Map chhu proper. Moreover the traditional spring source—Mapcha-Chungo—is on the Map chhu, which is the longest as well as the biggest head-water of the Karnali. So the glacial source of the Karnali is near Lampiya pass in the Zaskar range.

It may be noted that the combined river of Kali, coming from the Lipu Lekh pass and the Sarayu¹ coming from the Nandakot is called Sarada from Tankpur downwards. The Karnali coming from the Mapcha-Chungo, after its mountainous course in Manasa Khanda and Nepal, is called Gogra (*Ghaghra*), which receives the Sarada at Chouka-ghat. From Chouka-ghat till it falls into the Ganges, down Chapra, the combined river is known by both the names of Gogra and Sarayu. I make a mention of this fact here, because some people believe that the river Sarayu takes its rise from Manasarovar.

1 Since it is considered that it takes its source from the *Saras* or *Manasa-Saras*, it is called *Sarayu* (or *Sarajū*).

CONCLUSION

TRADITIONAL SOURCES

If Tibetan traditions are taken into account to fix the sources of the rivers under discussion, the source of the Sutlej (Langchen Khambab) is in the springs near Dulchu Gompa,¹ about 22 miles west of Parkha² (about 30 miles south-east of Manasarovar); that of the Indus (Senge Khambab) is in the springs of Senge Khambab (half a mile north of Bokhar chhu), north-east of Kailas, 53 miles from Parkha (about 62 miles from the Manasarovar); the source of the Brahmaputra (Tamchok Khambab) is at the head of the Chema-yungdung at the Tamchok Khambab *Chhorten*, 92 miles from Parkha (about 62 miles south-east of Manasarovar); and that of the Karnali (Mapcha Khambab) is in the spring Mapcha-Chungo, about 23 miles north-west of Taklakot (about 30 miles south-east of Manasarovar).

When once it has been accepted that the sources of the Tibetan rivers are to be located according to the local tradition I have no dispute in accepting the source of the Indus, as pointed out by Sven Hedin, since I too came to the same conclusion when I visited the place on July 4, 1937, and stayed in the surroundings for three days. But I would certainly

¹ I visited Dulchu Gompa on August 30, 1936 and July 6, 1941, and the Kanglung glaciers on June 16, 1937.

² Distances are given from Parkha, as it is the Post-stage and Tibetan Official Transport Agency, situated midway between Kailas and Manasarovar. Mileages given in Tibetan area are subject to slight correction.

make an emphatic note of dissent against his placing the sources of the Sutlej and the Brahmaputra in the Kanglung and the Kubi glaciers instead of in the traditional places, Dulchu Gompa and the Chema-yungdung kangri glaciers respectively. If any other theory but that of tradition is accepted in fixing the sources of these rivers, the sources of all the three rivers, the Sutlej, the Indus, and the Brahmaputra are to be certainly shifted from their present positions as given by Sven Hedin and should be placed elsewhere after a fresh, systematic, and scientific exploration.

It will not be out of place if I quote here a few lines from the *Journal of the Royal Geographical Society*, London for February, 1939, from Dr. T. G. Longstaff's note on my short paper on the subject published in the *Journal*. "I am in full agreement with him (Swami Pranavānanda) in accepting the traditional sources of the four rivers. If length is to be the criterion, then further survey is required. If volume is taken as the test, then, with glacial sources and an Arctic winter climate to contend with, flow must be measured throughout the year. It savours of impertinence for Europeans to assert their views against the usage of other civilizations."

I have got no objection if these rivers are traced to the genetic sources without dislocating the traditional places, as it is logical and does not tamper with the religious susceptibilities and usages of the local people concerned. Thus without dislocating the traditional sources we can trace to the genetic source, in the case of the Sutlej, either to the Lhe la or Tsethi la (30 miles from Parkha), the head of the Lha chhu (according to the quantity of water); or to the Kang-

lung kangri glaciers (about 65 miles from Parkha), at the head of the Tag tsangpo (according to length). So also the genetic source of the Brahmaputra can be taken to the Chema-yungdung kangri glacier¹ (or Tamchok Khambab kangri glaciers) a mile up the Tamchok Khambab *Chhorten*; and the genetic source of the Karnali to the Lampiya pass (two short days' journey from the traditional source, Mapcha-Chungo), both in respect of length and volume of water. Then in the case of all these three rivers—Sutlej, Brahmaputra, and Karnali—the sources will be glacial. But in the case of Indus if we want to go to the genetic source, without disturbing the traditional source, it would be at the head of the Bokhar chhu or near the Lama la (a short day's march from the springs of Senge Khambab), neither of which is glacial. Moreover the Bokhar chhu is neither the biggest nor the longest of the head-streams of the Senge.

I have investigated and visited the sources of these four rivers from all points of view (tradition, quantity of water, length, and glacier) should the criterion for fixing the source of the river be changed in future.

SOURCES ACCORDING TO THE QUANTITY OF WATER

Should the quantity of water be the criterion, then the source of the Sutlej is near the Darma pass (four

¹ It will not be out of place if I just make a reference here to the source of the river Kali. The genetic source of the Kali is near the Lipu Lekh pass, but the traditional source is in the springs of Kalapani, nine miles before reaching the Lipu Lekh. As the river Kali is considered the boundary between Nepal and British India, the territory of Nepal along the Kali ends abruptly at Kalapani. So it is clear that in the case of the Kali also, the traditional source, in the springs of Kalapani, has been accepted by the Survey Office.

days' journey from Dulchu Gompa), at the head of the river Darma-yankti; the source of the Indus is near the Topchhen la (26 miles from Parkha) at the head of the Lungdhep chhu; or at the head of the Gartong chhu in the Langpochhe chhu; the source of the Brahmaputra is in the Kubi glaciers at the head of the Kubi river (3 or 4 short days' march from the Chema-yungdung glaciers); and the source of the Karnali is near the Lampiya pass (2 short days' march from the spring Mapcha-Chungo). When thus volume is taken into consideration the sources are all glacial. Excepting in the case of the Karnali, the traditional sources of all the other three rivers are dislocated. According to volume the source of the Sutlej may also be at the head of the Trokpo-shar chhu, or the Chukta chhu, or the Lha chhu, which has been already discussed in detail under the heading "Source of the Sutlej."

SOURCES ACCORDING TO LENGTH

Should length be the test, the source of the Sutlej would be in the Kanglung kangri. The source of the Indus would be near the Topchhen la at the head of the Lungdhep chhu; the source of the Brahmaputra is in the Chema-yungdung or Tamcok Khambab kangri glaciers at the head of the river Chema-yungdung or at the head of the Angsi chhu in the Angsi glaciers; and the source of the Karnali is near the Lampiya pass. When length is taken as the test, the traditional sources of the three rivers—Sutlej, Brahmaputra, and Karnali—are in tact, and that of the Indus alone is dislocated; but the sources of all the rivers are glacial.

Sven Hedin's sources of the Sutlej in the Kanglung kangri, of the Indus in the springs of Senge Khambab, and of the Brahmaputra in the Kubi glaciers would not satisfy any one of the above three criteria—tradition, volume, or length—in its entirety; and as such he cannot claim to be "the first white man and European" to discover the sources of these rivers finally, unless one accepts his fixing of the sources at random, applying different criteria for different rivers, to suit his own convenience, whim, and taste.

I now leave the matter for serious consideration of the earnest and sincere seekers after truth in this realm of knowledge to draw their own judgment in the light of the few facts I could place before them. Truth will and shall have to come to light some day. It cannot be hidden for ever.

Let me close my thesis with the famous quotation from the *Brihadaranyaka Upanishad* :

असतो मा सद्गमय
तमसो मा ज्योतिर्गमय
मृत्योर्माऽमृतं गमय ॥

From untruth lead me to Truth;
From darkness lead me to Light;
From mortality lead me to Immortality.



APPENDICES

APPENDIX 1

GLOSSARY OF TIBETAN AND OTHER WORDS ...	259

[H.—Hindi ; S.—Sanskrit ; K.—Kumaon ; Bh.—Bhotia ; and the rest are all Tibetan words.¹]

Bhot (H.)—Indian Borderland of North Almora, North Garhwal, North Tehri, etc.

Bhotia (H.)—An inhabitant of Bhot.

Bodhisattva (S.)—One who is qualified to attain Buddhahood or *Nirvana*, but has delayed it and has remained in this world to help the striving human beings by preaching the Law.

Bot, Bod, or Bod-yul—Tibet.

Chakarma—Gull.

Chakta—Matchbox.

Chak-tak—Chain.

Cham—How many ; madam.

Chamba or Champa—Maitreya.

Cham-kushok—Madam or *mem-sahiba*.

Champa—*Sattu* or parched barley powder.

Chatti (K.)—A staging-place on the pilgrim-route to Badrinath and Pashupatinath.

Chema—Sand.

Chema-kara—Sugar.

¹ All the Tibetan words are given as they are actually pronounced but not as they are written, for, nearly half the letters written are silent. Every effort is made to give as correct a pronunciation as possible of all Tibetan words. The pronunciation varies from district to district.

Very often *ch* and *y* are pronounced as *j* (Chin as Jin and Yogi as Jogi), *k* as *g* (Kangri as Gangri), *p* as *b* (Parkha as Barkha), and *t* as *d* (Tarchhen as Darchhen) and vice versa. *Ts* is almost equivalent to a sound midway between *ch* and *chh*, as Tsepgye or Chhepgye or Chepgye.

- Chema-nenga—Five-coloured sands of Manasarovar.
- Chen-khang—A small image-hall where *pujas* are performed regularly, daily morning and evening.
- Chenresig or Chenrezig—Avalokiteshvara.
- Chhagna-dorje—Vajra-pani.
- Chhak-chhal-gang or Changja-gang—A place, wherefrom prostration-salutation is made to any holy place.
- Chham—Solitary confinement for a fixed period for doing meditation and *pujas*.
- Chhang—A kind of light beer made by fermenting barley.
- Chhang-rin—Present or *bakshish* (literally price of *chhang*).
- Chhasu—Tax-collector.
- Chheme—Butter lamp.
- Chhen, or Chhe—Big.
- Chhen—Night.
- Chherba—Rain.
- Chhongra—Mart or *mandi*.
- Chhopa—Images made of *sattu* and butter used in *tantrik* rites.
- Chhorten—A sort of monument, *stupa*, or *chaitya*.
- Chhu—Water, river, rivulet, or stream.
- Chhu-mar—Ghee or clarified butter.
- Chhura—Cheese.
- Cho—Tibetan great antelope (*Pantholops* Antelope).
- Chomo—Nun.
- Chong—Onion ; any commodity for sale.
- Cho-nga—Full moon day.
- Chung—Small.
- Daba—Ordinary *sadhu* or monk.
- Dalai Lama—Ocean *Guru*, the Sovereign political head of Tibet, believed to be the incarnation of Bodhisattva Avalokiteshvara.
- Dama—A sort of thorny juniper bush, which is used as fuel and which burns even when green, Tibetan furze.
- Damaru (S.)—A vibrant (double) hand-drum.
- Dang—Yesterday.
- Dazang—The managing body of a monastery.
- De—Rice.
- Demchhok or Demchhog—The presiding deity of Kailas.

- Demo—Tibetan cow.
 Dhak—Nepalese Rupee.
 Dhara (H.)—A water tap
 Dhura (H.)—Pass.
 Diring—Today.
 Do—Stone.
 Dok-pa—Dweller of a black tent or a shepherd.
 Dong—A black tent of a shepherd.
 Doukhang—*Dharmashala* or a free rest house.
 Dorje—*Vajra* or diamond.
 Dorje-Phagmo—*Vajra-Varahi*.
 Du—Barley.
 Duk—Yes or there is.
 Duk—Bhutan State.
 Duk-pa—A person belonging to Bhutan State.
 Dum—Chinese brick-tea.
 Duvang—General image-hall.

 Gad (K.)—A hill stream or rivulet.
 Gangri—Glacier or Kailas.
 Gar-pon—Officer of Gar or Gartok, Viceroy of Western Tibet.
 Go—Head.
 Goa—Tibetan gazelle.
 Gokpa—Garlic.
 Gompa or Gonpa—Buddhist monastery or lamasery.
 Gopa or Goba—Village headman.
 Gormo—Indian Rupee.
 Gur (H.)—Jaggery.
 Gutang—Nepalese *Mohar*.
 Gya-gar—White plain or India.
 Gya-nak—Black plain or China.
 Gyalpo—Raja, chief, or king.

 Havan (S.)—Offerings to the fire.
 Hun or Hundesh (Bh.)—Tibet.
 Huniya (Bh.)—Tibetan.

 Ja—Tea
 Jamb-yang—Manju-ghosha.

Ja-ril—A ball of chinese tea.

Jav—Half a *Tanga*.

Jhabbu—Crossbreed of a Tibetan bull and an Indian cow.

Jilab—*Prasad*, something taken as a memento either from a holy person or place.

Jinbu or Jimbu—Tibetan onion leaves.

Joo—Salutation or thanks.

Kang-ri—Snow-mountain, glacier, or Kailas.

Kangri Karchhak—*Kailas Purana*.

Kang Rinpochhe—Jewel of Snows or Holy Kailas.

Kanjur—Translation of Buddha's sayings and teachings in 108 volumes (see p. 89).

Kara—Sugar-candy.

Khamjam—Salutation.

Khampa—A Tibetan domiciled in India or a native of Kham (a province in Eastern Tibet).

Khangba—House.

•Khar—Fort.

Khatak—Loosely woven gauze-like white linen used as a garland in Tibet, a ceremonial scarf.

Khi—Dog.

Khir—Bring.

Kiyang or Kyang—Wild horse or ass.

Kong—High, up, or senior ; rate.

Kor—Circumambulation.

Korlo—Prayer-cylinder or prayer-mill.

Kunchhok-sum—By God ; an oath.

Kund (H.)—A trough, tub, bath, pool, or tank either artificial, or natural ; a lake or lakelet.

Kur—Tent.

Kushok—Mister, *shreeman*, or *sahab*.

La—Pass.

Labrang—General Managing Body of a monastery, usually deputed by a bigger monastery in Central or Eastern Tibet to its branch in Western Tibet.

Labu—Turnip.

Lam—Path.

Lama—Buddhist monk of higher order, Guru or high priest, or spiritual teacher.

Langak Tso—Rakshas Tal.

Langehen Khambab—The river coming out of the mouth of an elephant—Sutlej.

Laptche—A heap of stones generally raised at the top of mountains, at the end of ascents, wherefrom some holy place is seen conspicuously, or at the top of passes, or on the way to any holy place representing the deity of that place, all amounting to clear the way of stones. Streamers are hung on them.

Lha—*Devata* or deity.

Lha-khang—Deity-house or image-hall.

Lham—Tibetan boots coming up to the knees.

Lharchi or Lharche—Musk.

Le—Camping ground with walled enclosures.

Lo—Belt of a horse.

Luk—Sheep.

Lung—Wind.

Lung, Lungba, Lungma, or Lungva—Valley.

Maidan (H.)—Plain.

Mak-pon or Magpon—Military Officer or *Patwari*.

Mandal—Cairn or stones piled one over another like a pillar ; a *yantra*.

Mandi (H.)—Market or mart.

Mani—The *mantra* *Om mani padme hum*, or jewel.

Mani-cylinder—Cylinder in which slips of *mani-mantra* are kept.

Mani-stone—Stone on which *mani* is inscribed or embossed.

Mani-wall—Wall on which *mani*-stones are kept.

Mantra (S.)—Mystic formula (see footnote on p. 93).

Mapcha Khambab—The river coming out of mouth of a peacock—Karnali.

Map chhu—Karnali.

Mapham—The Unconquerable Manasarovar.

Mar—Butter.

Marku—Oil.

Mathova—Manasarovar.

Mavang—Manasarovar.

Mayur—Crevasse or fissure.

Me—Fire ; no.

Men—Medicine.

Mi—Man.

Mi-duk—No or there is not.

Naktang—*Tanga*.

Namkang—New moon day.

Naning—Last year.

Naza—Disease.

Nechen—Place of pilgrimage or a *tirtha*.

Nerpa or Nerba—Steward or secretary.

Ngangba—Swan.

Ngari—Western Tibet.

Ngato—Tomorrow.

Ngima—Day or sun.

Ngyul—Silver or money.

Nirbishi (K.)—A variety of aconite.

Nirvana (S.)—Salvation.

Num-nak—Mustard oil.

Nya—Fish.

Nyakor—Pilgrim.

Nyan—Great Tibetan sheep (*Ovis Ammon*).

Nyima—Day, sun, or sunlight.

Odyar (K.)—Cave.

Oma—Milk.

Pa—*Wala*.

Padav (H.)—Staging-place.

Pagtuk—Chinese brick-tea.

Palden—*Shree*.

Pan-chakki (H.)—Water-mill.

Panchhen Lama or Penchhen Lama—Spiritual head of Tibet,
believed to be the incarnation of the Bodhisattva Amitabha
Buddha.

Par—Photo.

Parikrama (S.)—Circumambulation.

Phagbe—Wheat flour.

Phing—Tibetan vermicelli made of pea flour.

Phuk—Cave.

Phuldo—Crude Tibetan soda or baked *seru-tsa*.

Po—Incense.

Po or Poyul—Tibet.

Pombo—Officer.

Pomo—Woman ; female ; daughter.

Prasad (S.)—Something taken from a Holy place or person, charged with spiritual vibrations, as a sacred memento or remembrance.

Puja (S.)—Worship.

Puram—*Gur* or jaggery.

Purana (S.) A book of ancient Indian history and mythology.

Ra—Goat.

Re—Cotton cloth ; ' yes sir '.

Ri—Mountain.

Ring—Price.

Rinpochhe—Jewel ; holy ; holiness.

Sa or Za—Day of the week.

Sadhu (S.)—A Hindu ascetic or holy man.

Sakya-Thubba—Sakya-Muni or Buddha.

Sangpo or Sampo—Brahmaputra.

Sapta—Map.

Sarni (H.)—*Dharmashala*.

Sari (H.)—A Hindu woman's chief article of dress.

Sattu (H.)—Parched barley powder.

Senge Khambab—The river coming out of the mouth of a lion—
, Indus.

Ser—Gold or yellow.

Seru-tsa—A kind of crude soda (unbaked).

Shapje—Footprint.

Shing—Tree ; fuel ; wood ; stick.

Shok—Come on.

Shungchhong—Government Trader.

Shya—Meat.

Shyo—Curds.

Siddha (S.)—One who has attained high psychic and supernatural powers.

Sola—Charcoal.

Sug—Pain.

Ta—Horse.

Ta-lo—Horse-year ; this year.

Tamehok Khambab—The river coming out of the mouth of a horse—Brahmaputra.

Tamo—Cold.

Tanjur—Translation of all *shastras* (see p. 89).

Tanga or Tanka—Tibetan silver coin, equivalent to four annas.

Tantricism (S.)—Mystic cult.

Tantrik (S.)—Mystic.

Tara—Buttermilk.

Tara (S.)—A female deity, common both to Hindus and Buddhists.

Tarchema—*Chook* or a sour fruit.

Tarchok—Flags and festoons especially of five colours: white, red, green, yellow, and blue.

Tasam or Tarzam—Transport or Post Stage Officer.

Tasam—Highroad.

Te—Mule.

Thanga—Plateau or *maidan*.

Thanka—A Tibetan banner-painting especially of Buddhistic deities, saints, *yantras*, etc.

Thukpa—A semi-liquid dish made of *sattu*, cheese, and meat.

Thu—A preparation made of mixing cheese with *gur* and butter.

Thuma—An aphrodesiac or rejuvenating herbal root.

Ti (Bh.)—Water.

Tima—Cream.

Tisi—Kailas.

To—Stone.

Trama—Pea.

Tsa—Salt.

Tsabo—Hot.

Tsampa or tsamba—*Sattu*.

Tsangpo—Big river; commonly used for the Brahmaputra in Central Tibet.

Tso—Lake.

Tuchhe-chhe—Thanks.

Tugu—Son ; boy.

Tulku—*Avatar* or incarnation.

Tulku-lama—Incarnation-lama.

Tumo—Heat.

Udyar (H.)—Same as *odyar*, cave.

Urko Kong—Viceroy Senior.

Urko Yok—Viceroy Junior.

Vihara (S.)—University or monastery.

Yak—Tibetan bull.

Yambu—Nepal.

Yankti (Bh.)—River.

Yantra (S.)—Mystic circle geometrically subdivided into circles and squares.

Yok—Lower or junior.

Yul—Village.

Yung-chhong—Government Trader or State Merchant.

Zaharmora (H.)—Serpentine.

Zong or Zongpon—Governor ; Governor's residential building ; fort.

NUMERALS

1	2	3	4	5	6	7	8
Chik	Nyi	Sum	Shi	Nga	Tug	Dun	Gye
9	10	23	30	40			
Gu	Chu	Nyi-shu	Sum-chu	Ship-chu			
50	60	70	80	90			
Map-chu	Tug-chu	Dun-chu	Gye-chu	Gup-chu			
100	200	500	1,000				
Gya-thamba	Nyi-gya	Sum-gya	Tong				
10,000	1,00,000	10,00,000	1,00,00,000				
Thi	Bum	Chhiva	Sayap				
$\frac{1}{2}$	$1\frac{1}{2}$	$2\frac{1}{2}$					
Pheka or chheka	Chhedang-nyi	Chhedang-sum					
$3\frac{1}{2}$	$4\frac{1}{2}$	$\frac{1}{4}$					
Chhedang-shi	Chhedang-nga	Shi-ja					

APPENDIX II

TARCHHEN TO THE SOURCE OF THE INDUS

BY THE LHE LA AND BACK BY THE TOPCHHEN LA—92 MILES

Halt No.	Name of place	Distance between two places	Total mileage	Remarks
	Tarchhen ¹	0	0	Also pronounced Darchhen ; 15,100 ft., Parkha <i>Tasam</i> ² is 7½ m. ³ from here ;
	Sershung	3½		here is the flag-staff called <i>Tarbochhe</i> , dedicated to the Lord Buddha ; cross the Lha chhu to its right bank to reach the gompa
	Nyanri Gompa	1½		also called Chhuku, first monastery of Kailas, there are two big elephant tusks in it ;

¹ Tarchhen is a village situated at the southern foot of the *Kailas Parvat*, wherefrom *Kailas-parikrama* both begins and ends. This village belongs to the State of Bhutan and is under a Bhutanese monk-officer called Tarchhen Labrang, who lives here in a big building, to look after the Bhutanese possessions in Tibet. There are also a few huts and some black tents. A Mandi is held here by the Bhotias of Johar and Darma Paraganas for over 2½ months every year. Provisions can be got from the Mandi. This is a big wool-shearing centre. One can have a glimpse of the Kailas Peak from here.

From the hills situated just on the northern side of Tarchhen, one can command the grand view of the great amphitheatre of the huge Parkha plain, stretching east-west as far as the eye could travel, intercepted by a network of meandering streams and the hills gradually mounting up to the Mandhata and Nepal peaks with the Rakshas Tal-blue picturesquely set in it.

² Parkha is the third *Tasam* on Gartok-Lhasa highroad. There are two houses here, one of which belongs to the *Tasam* and the other is a Rest House. There are also some black tents of shepherds where milk, curds, *chhura*, and butter may be purchased.

³ m. = mile or miles.

Halt No.	Name of place	Distance between two places	Total mileage	Remarks
	Dira-phuk Gumpa ¹	7½		the cave Langchen-phuk is very near the monastery ; about 5 m. further the Dunglung chhu falls into the Lha chhu, upper part of the Dunglung valley abounds in wild yaks and one path goes up the valley to the Senge Khambab ; 2¼ m. further second monastery of Kailas, the best and the most imposing view of the Mount Kailas can be had from here ; leave the <i>parikrama</i> -route to the right and proceed northward up the Lha chhu ; 3¼ m. to Selungma, <i>le</i> ² 2½ m. to Chhu-lungma, <i>le</i> ; 1½ m. to Kelungma, <i>le</i> ; ¾ m. to

1 There are three routes from Dira-phuk to go to the Senge Khambab : (1) up the Dunglung chhu by the Dungleang la, (2) up the Lha chhu by the Tsethi and Tsethi-lachen la, and (3) by the Lhe la, which is the shortest of the three routes ; the second route is a very bad and a long one ; and the first one is the longest. For returning to Tarchhen from the Senge Khambab the route by the Topchhen la is the nearest and easiest. Tibetan pilgrims to the Senge Khambab follow the route given in this table because in so doing they can do the circuit of the Holy Kailas avoiding the steep ascent and descent of the Dolma la. the author took 23 rounds of the Holy Kailas.

Mount Kailas displays itself to the visitor in all its magnificence here and one can have the best view of it from the top of this monastery. It is like a huge silver dome placed on a gigantic pedestal with two guards on either side, Vajrapani and Avalokiteshvara. Facing the Kailas the names of the peaks from west to east are as follows : *Chhagnadorje* (Vajrapani), *Kang Rinpoche* (the Holy Kailas Peak), *Chenresig* (Avalokiteshvara), *Jambyang* (Manjughosha), *Chhogel-Noreang*, and *Shavari*. One can spend days and nights like minutes without being tired, watching the splendour of the sacred Kailas Peak, sitting in front of one of the small windows or on the top of the monastery. The grandeur and sublimity of the view and the spiritual atmosphere pervading there is simply indescribable. On a moonlit night the view is all the more grand.

2 *le* = Camping ground with walled enclosures.

Halt No.	Name of place	Distance between two places	Total mileage	Remarks
1	Do-lungba	7½	19½	Do-lungva, ¹ <i>le</i> , very cold, from here very steep ascent over scree up to the pass, also called Lapche-chikpa la, cairns and <i>laptches</i> , steep descent to
	LHE LA	3½		<i>le</i> , from here descent along the stream coming from Lhe la to its confluence with Lungdhep chhu,
	Sharshumi	5½		the stream coming from Lhe la falls into the Lungdhep (opposite this place Nyimalung chhu falls into the Lungdhep on its right bank); 2½ m. along the left bank of the Lungdhep chhu to
	Lungdhep chhu	6		
2	Lungdhep camp	2½	36½	C. ² and <i>le</i> on either bank of the river, black tents, (about a mile down this place, situated on the right bank of the river, is the hill Lungdhep-ningri, at the foot of which the river is broadened into a big lake, called Lungdhep-ningri tso), cross the 2 to 3 feet deep river to its right bank, after some ups and downs to
	Rungmagem camp ³	7½		<i>le</i> , black tents, cross the stream to its right bank; ¾ m. very steep ascent to the top of

1 *Lung, lungma, lungba*, and *lungpa*, all mean a valley.

2 C. = Camping ground.

3 The upper course of the river is called Munjan chhu, and the lower course Rungmagem chhu till it joins the Sengo or the Indus. Besides the local people, shepherds from the eastern and north-eastern parts of Lhasa especially Amdo, came here with hundreds of yaks and thousands of sheep and goats to graze their cattle and at the same time

Halt No.	Name of place	Distance between two places	Total mileage	Remarks
3	Senge Khambab	2	46	Snege-chava, <i>laptche</i> ; $\frac{3}{4}$ m. very steep descent to Bokhar chhu, cross the 2 feet deep river to its left bank ; $\frac{1}{2}$ m. farther up to
	Rungmagem	2		Senge Khambab or the Traditional Source of the Indus, <i>le</i> , 16,956 ft., black tents in the surroundings.
	Lungdhep-ningri	4 $\frac{1}{2}$		Back to Rungmagem camp, <i>le</i> ; 3 m. steep ascent ; 1 $\frac{1}{2}$ m. very steep descent to
	Lungdhep chhu	2		<i>le</i> , <i>le</i> , (from here up along the the Lungdhep chhu), it is

do a number of rounds of Kailas and Manasarovar ; as such they stay in the Senge area for four or five years continuously and then return to their homes. There are extensive pasture-lands here and the dairy products of these regions are considered the best in the whole of Tibet. One may start good Dairy Farms with great advantage.

1 Here are four big freshwater spring and several small ones welling up out of the ground. Near by is a quadrangular *mani*-wall with several *mani*-slabs. There are some stones over 1 $\frac{1}{2}$ feet high, each containing a single letter of the *mani*-mantra. On another stone the wheel of life (*Jessana Chakra* containing the letters of the *mani*-mantra) is inscribed. The temperature of the combined waters of the springs was 48.5°F. The water coming out of the springs forms into weedy ponds and flows out into the Bokhar chhu as a small brook, half a mile down below. Just by the side of the springs, situated on the edge of a huge slab of white rock are three pillar-like cairns or *lha-do* or *lha-to* (gods'-stones), *laptches*, and some *mani*-slabs. On one of these there are some coloured rags of cloth—*tarchok*, offered by some Tibetan pilgrims. The rugged hill on the north of the springs is called Senge-Yura and to the south situated on the left bank of the Bokhar chhu is Senge-Chava, crossing which one gets down to Rungmagem camp. To the north-east of the Senge Khambab is the Lama In (17,800 ft.). I visited the Source of the Indus on July 4, 1937, and stayed in the surroundings for three days. Senge is also pronounced as 'Sengi' or 'Singi' and Khambab is pronounced as 'Khamba' or 'Kabab' in Central and Eastern Tibet.

Halt No.	Name of place	Distance between two places	Total mileage	Remarks
	Nyimalung chhu	4½		all marshy bog-land up to the foot of Topchhen la, cross to it its left bank (this falls into the Lungdhep chhu, one furlong down below almost opposite the Lhe la chhu); 4 m. farther up the valley cross the 1½ to 2 feet deep Lungdhep to its left bank; 1½ m. farther one big stream falls into the Lungdhep on its right bank; 2 m. further up to
4	Foot of Topchhen la	7½	66	le, camp at the foot of the pass, very cold, from here very steep ascent on stones and through big boulders to
	TOPCHHEN LA ¹	5	71	Topchhen la (18,600?), about 200 yards on the pass, the whole pass was under snow and ice when I crossed it, 6½ m. very steep descent over huge boulders; 5 m. descent down the Topchhen valley; Kailas is seen from here, <i>laptche</i> , cairns; ¾ m. farther down is the confluence of the Topchhen chhu and the Lham-chhukhir chhu, there are big <i>le</i> everywhere in the Topchhen valley; cross the 3 feet deep Lham-

¹ TOPCHHEN LA is the watershed between the Lungdhep chhu (the highest and the biggest of the head-streams of the Songe in this area) and the Topchhen Chhu (which meets the Lham-chhukhir chhu a little up Zuthul-phuk Gompa to from the Zhong chhu). These two rivers are just on either side of the Topchhen la; but Sven Hedin placed them nearly 20 miles apart as the crow flies. This is due to the fact that he did not negotiate this pass. Anyway, this is given here as a piece of information for the guidance of future explorers. I am the first non-Tibetan who had ever crossed the Lhe la and the Topchhen la.

Halt No.	Name of place	Distance between two places	Total mileage	Remarks
				chhukhir chhu to its right bank a little up the confluence and then proceed; Kailas-parikrama road, $1\frac{1}{4}$ m. to the third monastery of Kailas; there are two small elephant tusks in this gomba.
5	Zuthul-phuk Gomba	$13\frac{1}{2}$		
	Tarchhen	$6\frac{1}{2}$	91	

APPENDIX III

TARCHHEN TO THE SOURCES OF THE BRAHMAPUTRA
AND THE TAG

ND BACK TO TAKLAKOT BY THE GURLA LA—198 MILES

Halt No.	Name of place	Distance between two places	Total mileage	Remarks
	Tarchhen Zhong chhu	0 3	0	Parkha ¹ is $7\frac{1}{2}$ m. from here, Cross the three-foot deep river to its left bank; 3 m. Avang chhu; 2 m. Philung-kongma chhu; $\frac{3}{4}$ m. Philung-pharma chhu; $2\frac{3}{4}$ m. Philung-yongma chhu; 3 m. Gyuma chhu; cross two or three of its ramifications $2\frac{1}{2}$ feet deep; $\frac{1}{2}$ m. Kyo, <i>le</i> , <i>mani</i> -wall; $2\frac{1}{2}$ m. further
1	Kuglung chhu	$14\frac{1}{2}$	$17\frac{1}{2}$	<i>le</i> ; $3\frac{3}{4}$ Lungnak chhu; $2\frac{1}{2}$ m. beginning of Kurkyal-chhungo (Kurkyal-chhungo itself is about $2\frac{3}{4}$ m. long); $2\frac{1}{2}$ m. Palchen chhu; $1\frac{1}{2}$ m. Palchung chhu; $2\frac{3}{4}$ m. Samo tsangpo; 2 m. Havaseni-madang; $1\frac{1}{2}$ m. to
2	Seralung Gompa	16	$33\frac{1}{2}$	the sixth monastery of Manasarovar, fine view of the Holy Lake; - $3\frac{1}{2}$ m. ascent and descent to Harkong, black tents, <i>le</i> ; 4 m. Chhomokur, black tents, <i>le</i> ; $7\frac{1}{2}$ m. further to

¹ The route from Parkha to Seralung is as follows: Parkha to Ngulukro 13m., *le*, (first day); cross the Gyuma chhu and proceed, on the way to Seralung cross the Palchen chhu, Palchung chhu, and the Samo tsangpo, Seralung Gompa 16m., (second day).

Halt No.	Name of place	Distance between two places	Total mileage	Remarks
3	Namarding	15	48½	big <i>le</i> , Manasarovar is seen from here ; 2 m. up the valley ; ¾ m. ordinary ascent ; 1½ m. very steep ascent to Changshala ; 1½ m. very steep descent ; <i>le</i> ; 2 m. through big boulders and stones to
	CHHUMIK-THUNGTO ²	7		the sacred spring Chhumik-thungtol, named Chakko in Sven Hedin's maps, from here up to Tag-ramochhe path goes up along the Tag,
	LANGCHEN KHAMBAB	3		the spring gushes out and flows through black boulders into the Tag that is near by ; this is also a sacred spring and is marked by several cairns and a big <i>laptche</i> in which is fixed a small pole

² *Chhu* means water, *mik* means eye, *thung* means see, and *tol* means salvation or *Nirvana* ; i.e., whoever even sees this spring obtains salvation or *Nirvana*, or whosoever sees this eye-like spring obtains salvation. The spring Chhumik-thungtol is situated in the deep narrow valley of the Tag tsangpo, between high volcanic mountains situated on either side of the river. It is surrounded by a big quadrangular *mani*-wall 16 yards long and 10 yards broad, and the flags and festoons (*tarchoks*) hoisted on it are just overhanging the spring, which is 3 to 4 feet deep and 3 feet in diameter. Through the crystal clear, charming and turquoise-blue water, could be clearly seen the blue and red beads, four inferior turquoises, two bangles, some shells and other petty articles, thrown in as offerings by devout pilgrims. The water in the spring is crystal clear and flows out from the bottom as a small brook into the Tag on its right bank a few yards below. The names of the three volcanic mountains between which the spring is situated are Chenresig (white), Chhagnadorje (blue), and Jamyang (yellow). There are several cairns set up by pilgrims all round and in the neighbourhood of the spring. Sven Hedin has wrongly named this spring as Chakko. It is written in the *Kangri Karchhak* that the Ganga or the Langchen Khambab takes its rise from Kailas but it first appears here ; and then reappears at Dulchu Gompa.

Halt No.	Name of place	Distance between two places	Total mileage	Remarks
4	Tag-ramochhe	2½	59½	bedecked with pieces of coloured rags like a scarecrow ; ¼ m. further there are white sands on either bank and in the bed of the river Tag for about 2 m., big camps, <i>le</i> , black tents, (from here one path goes up along the Tag tsangpo for about 10 m. to the Kanglung Kangri Glaciers , the Source of the Tag). 1 m. on marshes to Tag-ramochhe <i>chhu</i> ; 1 m. steep ascent to
	Tak-karbu la	2		the la, <i>laptche</i> , for 5½ m. proceed on beds of sharp gravel, stones, and big boulders, over ups and downs to
	Chamar	5½		Chamar, <i>le</i> , a hill on the left side of the road, there are some <i>tarchoks</i> and <i>laptches</i> on the top of the hill ; (this hill is just opposite the Kanglung glaciers which present a beautiful view) ; there are several lakelets between Tak-Karbu la and Chamar,
	TAG LA	¾	67½	17,382 ft., <i>laptches</i> , <i>tarchoks</i> , and cairns, this is a pass only in name without much ascent or descent on either side of it,
	Tamlung tso	3½		extensive camps on the shores of the lake, there are also several other small lakelets connected with one another, 2½ m. parallel to the lake (a stream from this lake flows out into the Angsi <i>chhu</i>), 2½ m. farther one path goes

Halt No.	Name of place	Distance between two places	Total mileage	Remarks
5	Angsi chhu	9½	80½	eastward to Kong-yu tso, Bongba, etc., 2½ m. gentle up towards the south. (Kongyu tso is seen from here on the north), 2¼ m. descent, steep descent, very steep descent, and descent to Angsi chhu, <i>le</i> , camps on either side of the river, cross the 3 feet deep river to its right bank, the river is broadened into lakelets at several places, the valley is very broad and grand, good pastures ¼ m. across the Angsi valley, 1¼ m. mild and steep ascent; nearly 2½ m. very gentle up on a plateau to the pass, it is very narrow like a lane, about 4 feet broad between two steep beautiful mountains on either side, <i>laptche</i> , (in the middle of the plateau, on to the left and just near the pass, on to the right there are two deep lakelets), several herds of <i>goa</i> and <i>cho</i> are seen on the plateau, ¾ m. steep descent down a narrow gorge to a beautiful lake situated on the left side of the road, 3½ m. ups and downs on beds of stones, midway is a beautiful semi-circular lake with an island in the middle, some more lakelets, cross a stream, ½ m. further ascent, 1 m. very steep descent to
	Shibla-ringmo la	4½		

Halt No.	Name of place	Distance between two places	Total mileage	Remarks
	Chema-yung-dung chhu	5½		the Chema-yungdung chhu. the whole bed of the river and the right bank are full of sand, of white opaque quartz, as if covered with snow; like the Angsi valley this valley also is broad and the river broadens into a series of lakelets at several places; 5½ m. up along the Chema-yungdung, the first glacier of the Tamchok Khambab; huge debris and big land-slips are lodged at the tongue of the glacier; there are some lakelets on the debris and on the glacier proper; from here the path takes a westward turn,
	CHEMA-YUNG-DUNG-PU	5½		
6	Tamchok Khambab ¹ TAMCHOK KHAMBAB KANGRI	3	96½ 97	Tamchok Khambab or the Source of the Brahmaputra. Glacier-source of the Brahmaputra.

¹ Tamchok Khambab (Tamchok means the celestial horse and Khambab means coming out of the mouth of), the Horse-mouthed river has got its traditional source here. Here is a big boulder about 12 feet high, on which are two footprints, over which is built a loose stone-walled hut facing the east. On the top of the hut are placed two horns of a wild yak. Adjacent to the boulder are one roofed and two unroofed donkhangs of loose stones piled up crudely. All around are several cairns. There is a dry spring near by, which is said to contain water in summer and rainy seasons. The river Tamchok Khambab or Chema-yungdung, as called here, is 50 yards from this monument or Chhorten. One mile up this place is another big glacier which my guide said was the main glacier of Tamchok Khambab, for the river Tamchok Khambab actually takes its rise from here. Nyakoras who regularly come here every year to graze their cattle give the following derivation

Halt No.	Name of place	Distance between two places	Total mileage	Remarks.
	Sibla-Dingmo la	12½		
7	Angsi chhu Tag la	4½ 13	114½	C., le, 17,382 ft.
8	Tag-ramochhe Chhumik-thungtol	8 4½	135½	C. le, sacred spring, le, after 14½ m. cross the 3½ feet deep furious Tag to its left bank, a little further is the place called Pomo-phuk where there are the ruins of a gompa, said, to have been destroyed by

of the word Tamchok Khambab; *ta* means horse, *amchok* means ears, and *Khambab* means coming out the mouth of; so, the meaning of the word Tamchok Khambab is 'Horse-ears-mouthed-river'. The Tamchok Khambab glacier and the Chema-yungdung-pu glacier are considered to be the two ears of the Brahmaputra and go by the common name of Chema-yungdung-pu, or simply Chema-yungdung; and the spring near the *chhorten* is the mouth. It is also pronounced as 'Chema-yuntung', 'Chema-yungtung', and 'Chema-yundung'. *Chema* means sand and *Yungtung* or *Yungdung* means *scastika* (卐). Opposite the monument is a broad-faced peak, separating the two glaciers of Tamchok Khambab, at least for the appearance. It is just possible that these two glaciers are connected with each other on the back of this peak. From Chema-yungdung-pu glacier this broad-faced peak appears to be a sharp pointed conical peak.

To the west or north-west of the main glacier of the Tamchok Khambab there is another small glacier, behind which is the Angsi glacier. I visited the Source of the Brahmaputra on June 17 and 18, 1937, when the whole bed of the river 15 to 60 feet broad was frozen *en bloc* 6 to 7 feet thick for 3 miles beginning from the main glacier downwards. In the middle of the frozen bed of the river, there was, as it were, a beautiful trench 3 to 6 feet broad and about 6 feet deep, between the perpendicular ice-walls of which the river was flowing with gurgling noises. Nyakora nomad shepherds go there in August for wild yak-hunting since, wild yak is found here in large numbers. Sven Hedin has wrongly placed the Source of the Brahmaputra in the Kubi glaciers instead of in the Chema-yungdung glaciers, mainly because he could not get transport to this real source. There is plenty of good grass in the Chema-yungdung valley and many shepherds come here to

Halt No.	Name of place	Distance between two places	Total mileage	Remarks
9	Tomomopo	15½	156½	Zoravar singh ; 1½ m. further is Tomomopo, geysers, boiling hot springs, lukewarm water springs, <i>kund</i> , <i>le</i> ,
	Nyomba-chhuten	¾		mad hot springs, <i>le</i> , several hot springs varying from lukewarm to boiling temperature ; a regular stream of hot water is flowing out of these hot water springs into the Tag ; there are some more hot springs on the other side of the river opposite this place at Chhu-phuk and at Ambu-phuk, 1 m beyond that place ; plenty of <i>jinbu</i> grows wild in the surroundings,
	Nimapendi chhu	3½		2 feet deep, cross it to its left bank, in this valley there are about 25 black tents of Nonokur for the greater part of the year,
	Yerngo Gumpa	3½		seventh monastery of the Lake,

graze their cattle. The white quartz sands of the river are very conspicuous for about ten miles from the source downwards, and they can be seen from long distances, as if there has been a fresh snowfall.

After the Angsi and the Rongak chhu join the Chama-yungdung tsangpo, as it is called there, broadens enormously into two big lakes called Rapgyal-chhungo and Guro-kyok. The Bhotia merchants who go from Manasarovar beyond the Kubi or Kupa Chhu for purchase of wool regard this broadened river to be the source of the Brahmaputra and call it *Brahma-kund*. As such they consider it sacred and bathe in it.

1 *Thu* means bath, *go* means head, and *lho* means south. Tibetans take their bath here or at least wash their heads. Even sheep and yaks are sprinkled with the holy water of the Lake. The gumpa is situated within a few yards from the shores of the Lake and is facing

Halt No.	Name of place	Distance between two places	Total mileage	Remarks
10	Thugolho Gompa	2½	165½	also called Thugo, eighth monastery of the Holy Manasarovar, Headquarters of the author, 2 m. to Namreldi chhu, 1½ m. to Selung Hurdung chhu 6½ m. gradual ascent to big <i>laptches</i> , flags, festoons and cairns; 16,200 ft., steep descent to
	Gurla la ¹	9½		<i>le</i> , caves,
	Gori-udiyar or Gurla-phuk	4		
11	Baldak	4½	183½	big C., <i>le</i> , 15,000 ft.
	Ringung	4½		village, C, <i>le</i>
	Toyo	7½		village, General Zoravar Sing's <i>samadhi</i> ,

east. This is the most important of all the Lake-monasteries. There is the image of Kangri-Lhabtsen in the special image-hall and of Dorje-chhang in the general image-hall. Through the window in the northern side of the gompa, one can enjoy a fine view of Kailas over the Holy Lake. Thugolho is a branch of the Simbiling Monastery of Taklakot, from where eight monks are deputed here for a term of three years.

It is here that I sojourned for a twelve-month in 1936-37 and a sixteen-month in 1943-44 and spend 4 to 6 months every year. A beautiful *Yajna Vedi* is constructed here and a two-storeyed *Manasa Vishramashala* is under project.

There are eight houses and a small *donkhang* near the monastery, but the villagers mostly live in shepherd camps and come here occasionally. A small *mandi* is held here for about a month in July-August, when 15 merchants of Chaudans and Byans gather. This is a big wool-shearing centre and is popularly known as Thokar Mandi by Indians. On the south of the gompa there are two peaks over 17,000 feet high in the Mandhata range. The western peak is called Thubba-ri and the top of the peak is at a distance of about five miles from here. From the top of this peak one can command one of the grandest panoramic views of the whole of Manas, Rakshas with its islands, Kailas and the whole stretch from Tirthapuri to Thokchen.

1 From here one can command a grand panoramic view of the surrounding region. On the back (in the south) is the long range of

Halt No.	Name of place	Distance between two places	Total mileage	Remarks
12	Taklakot	21 $\frac{1}{2}$	198	village, <i>Zong</i> , Simbiling Monastery, Mandi, 13,100 ft., Lipu Lekh pass, the Indian borderland is 11 m. from here.

snow peaks beginning from the Kamet; Lipu Lekh to Nepal; on to the right are the massive giant heads of the Gurla Mandhata (25,355; 22,650; 22,160); and in the front are the crystal clear emerald-watered Holy Manas Lake and Rakshas Tal (on the right and left respectively), in the background of which stands aloof, in the Kailas range, conspicuously and picturesquely the majestic silvery Kailas Dome with awe-inspiring solemnity and weird grandeur, facing the proud Mandhata and overlooking the twin lakes bedecked with graceful families of *Raja-hansas*. Parkha is about 23 miles from here by the direct route.

APPENDIX IV

TAKLAKOT TO THE SOURCE OF THE KARNALI AT MAPCHA-CHUNGO—23 MILES

Halt No.	Name of place	Distance between two places	Total mileage	Remarks
	Taklakot	0	0	Zong, Monastery, Mandi, after $2\frac{1}{2}$ m. cross the Karnali to village,
	Toyo	3		village, cross the Garu chhu,
	Delaling	$\frac{1}{4}$		before reaching this stream is the village Ronam on the right side and Salung and Doh situated on the right bank of the Map chhu,
	Ringung chhu	$7\frac{1}{4}$		cross the 3 to 4 feet deep river to its right bank,
	Map chhu or Karnali	$\frac{1}{4}$		
1	Harkong	$3\frac{1}{2}$	$14\frac{1}{4}$	village with 1 house and some black tents,
	Ur la	$6\frac{1}{2}$		last $\frac{3}{4}$ m. steep ascent, <i>laptche</i> , Mandhata is seen from here; 1 m. very steep descent to Tarachen, C.,
2	Mapcha-Chungo ¹	2	23	Traditional Source of the Karnali.

¹ On the right side of the road, situated on the edge of the right bank of the Map chhu, there is a big mani-wall with several mani-slabs and streamers. Getting down a few yards towards the bed of the river is the big spring of Mapcha-Chungo (Peacock-head) gushing out from the perpendicular wall of the steep bank of the river. There are some mani-stones and a few streamers near the spring. The water gushing out of the spring flows down into the Karnali below over a beautiful green velvety mossy dome-like mound. The moss over which the spring flows down has some resemblance to the neck of the peacock, hence the name Mapcha-Chungo. The glacial source of the Karnali is in the Lampiya pass which is at a distance of two short days' march from here.

At a distance of about 4 miles from here is the famous Mangahang Gompa situated on a mountain on the south, but it is not seen from the road. It belongs to Red Cap Section of monks. It was constructed about the year 1919 and a six-year old *talhu*-lama has been installed on the *gaddi* in August 1940. This is the second abbot to sit on the *gaddi* of the gompa.

APPENDIX V

TARCHHEN TO THE SOURCE OF THE SUTLEJ

AT DULCHU GOMPA—21 MILES

Halt No.	Name of place	Distance between two places	Total mileage	Remarks
1	Tarchhen	0	0	Cross the 2-3 feet deep swift river to its right bank, C., cross the 2-2½ feet deep river to its right bank, C., le, Gynima-Tarchhen road crosses, monastery, black tents, le, mani-walls, about 250 yards from the gumpa there are several fresh water springs welling out of the marshy ground, which the Tibetans assert to be the Traditional Source of the Langchen Khambab or the Sutlej ; the Darma pass, wherein lies the source of the Darma-Yankti (Langchen Tsangpo), is at a distance of four days' march from here. Tirthapuri is 14 miles from here.
	Lha chhu	2½		
	Karleb chhu	3		
	Changje-changju	7½		
	Dulehu Gumpa	8½	21	

APPENDIX VI

ABSTRACT OF MILEAGES BETWEEN IMPORTANT PLACES IN KAILAS AND KEDAR KHANDAS

	Miles
1. Almora to Lipu Lekh pass (Indo-Tibetan Border) ...	165½
2. Lipu Lekh to Kailas	72½
3. Almora to Kailas via Lipu Lekh pass	237
4. Almora to Kailas via Darma pass	227
5. Almora to Kailas via Unta-dhura pass	210
6. Joshimath to Kailas via Gula-Niti pass	200
7. Joshimath to Kailas via Danjan-Niti pass	160
8. Joshimath to Kailas via Hoti-Niti pass	158
9. Bedrinath to Kailas via Mana pass	238
10. Mukhuva (Gangotri) to Kailas via Jelukhaga pass ...	243
11. Simla to Kailas via Shipki pass and Gartok	445
12. Simla to Kailas via Shipki pass and Thuling	473
13. Srinagar (Kashmir) to Kailas via Ladakh	605
14. Pashupatinath (Nepal) to Kailas via Muktinath and Khochar	525
15. Lhasa to Kailas via Gyantse and Shigartse	800
16. Kailas-Parikrama	32
17. Circumference of Manasarovar	54
18. Manasarovar-Parikrama	64
19. Circumference of Rakshas Tal	77
20. Kailas to the Source of Indus via Lhe la or Topchhen la	46
21. Kailas to the Source of Brahmaputra	97
22. Kailas to the Source of Sutlej (at Dulchu Gompa) ...	21
23. Kailas to the Source of Tag Tsangpo	69½
24. Taklakot to the Source of Karnali	23
25. Kailas to Manasarovar	16
26. Kailas to Tirthapuri	28
27. Kailas to Dulchu Gompa	21
28. Kailas to Gyanima Mandi	38

Miles

29.	Gyanima Mandi to Gartok	...	...	76
30.	Gyanima Mandi to Tirthapuri	...	...	27
31.	Gyanima Mandi to Sibchilim Mandi	...	...	28
32.	Gyanima Mandi to Taklakot	...	...	49
33.	Taklakot to Thugolho	...	...	34
34.	Taklakot to Khocharnath	...	...	12
35.	Sibchilim to Nabra Mandi	...	...	38½
36.	Nabra to Thuling	...	...	33½
37.	Thuling to Badrinath	...	...	100
38.	Tarchhen to Serdung-chuksum	...	...	7
39.	Tarchhen to Tso Kapala	...	...	6
40.	Tarchhen to Serdung-chuksum and back via Tso Kapala	...	...	17½
41.	Haldwani to Almora (on foot)	...	...	41
42.	Haldwani to Almora (by bus)	...	...	88
43.	Almora to Pindari Glacier	...	...	73
44.	Rishikesh to Jamnotri	...	...	118½
45.	Rishikesh to Gangotri	...	...	145
46.	Rishikesh to Kedarnath	...	...	133½
47.	Rishikesh to Badrinath	...	...	167½
48.	Rishikesh to Joshimath	...	...	148½
49.	Joshimath to Badrinath	...	...	19
50.	Ramnagar to Badrinath	...	...	164
51.	Jamnotri to Gangotri	...	...	98½
52.	Gangotri to Kedarnath	...	...	123
53.	Kedarnath to Badrinath	...	...	101
54.	Mussoorie to Jamnotri	...	...	86
55.	Rishikesh to Jamnotri, Gangotri, Kedarnath, Badrinath, and back to Rishikesh	...	...	608
56.	Rishikesh to Tehri (motor road)	...	...	50
57.	Tehri to Gangotri	...	...	100
58.	Rishikesh to Chamoli (motor)	...	...	121
59.	Chamoli to Badrinath	...	...	48
60.	Ranikhet to Karna-prayag	...	...	60
61.	Karna-prayag to Badrinath	...	...	67
62.	Garur or Baijnath to Nanda-prayag	...	...	45½
63.	Nanda-prayag to Badrinath	...	...	54½
64.	Gangotri to Gaumukh	...	...	13

				Miles
65.	Uttarkashi to Dodhi-tal	...	...	18
66.	Kedarnath to Vasuki-tal	...	...	2
67.	Chamoli to Gohna Lake	...	...	12
68.	Pandukeshvar to Lokpal	...	...	12
69.	Badrinath to Satopanth	...	...	18
70.	Milam to Shandilya-kund	...	...	6
71.	Milam to Surya-kund	...	...	13
72.	Dharchula to Chiplatek	...	...	25

APPENDIX VII

SYMBOLISM IN TIBETAN BUDDHISM¹

YIDAM (यिदम्) AND YAB-YUM POSE (यब् युम् मुद्रा)

EVERY Buddhist Sect in Tibet, every gampa (monastery) and every lama (Tibetan high monk) has a *Yidam* (*Ishta-devata*), tutelary deity, or god-protector of its or his own. The *Yidam* of a lama and that of the sect or monastery to which he belongs need not necessarily be the same. It is only a monk that can propitiate or worship the *Yidam* directly, the householder (*grihastha*) cannot do so but through a monk. *Dolma* (*Tara*) is the only *Yidam* of the higher order who can be worshipped by the layman.

The *Yidam* is almost invariably represented in *Yab-Yum Mudra* (lit. father-mother pose). The fundamental principle of the Yoga System, namely the union of the individual soul with the Universal Spirit or the union of the Spirit with matter is symbolically represented by the Tibetan mystics as *Yab-Yum* posture. *Yab* represents primeval male, *purusha*, Divinity, *Shiva*, *Vajra-dhatu*, or the subject. *Yum* represents primordial female (or producing) principal, *Prakriti* (matter), *Shakti*, *Kali*, *Garbha-dhatu*, or object. So the *Yab-Yum* pose represents divine ecstasy or the spiritual communion with the Most High. As a matter of fact *Yidam* is considered by Tibetans to be more efficacious if worshipped with his *Shakti* in *Yab-Yum* pose. This posture is also called *Vajra-mudra*.²

This *Yab-Yum mudra* is geometrically represented in *Mandalas* or *Yantras* by two triangles—one resting on its base and the other resting on its apex, mutually interlocked as shown in the illustration 8.

¹ This was originally published in the 'Journal of the United Provinces Historical Society', Vol. XVIII (July-December 1945).

² In the esoteric doctrine *Vajra* is the symbol of *Linga*.

The first represents *Yoni*, *Prakriti*, imperfection, the exoteric principle, or objectivity, and the second represents *Linga*, *Purusha*, perfection, the esoteric principle, or subjectivity. Subjectivity and objectivity, acting and reacting upon each other, produce this universe of diversity and many-ness. This is the underlying principle for representing the *Brahmanda Chakra* or the Wheel of Universe by two interlocked triangles. Various forces of the *Mula-prakriti* or *Maha-Kali* have been represented as different *Yums* or *Matirkas* of different *Yabs*. Just as the Hindu, whether male or female, has not got even the least idea of sex or sensuous feeling while worshipping the *Linga* or phallus of Shiva, so a Tibetan, when he or she does the worship of the *Yidam*, in *Yab-Yum* pose.

CHHAM

Lamas of higher order usually retire to a solitary place, almost invariably to a cave for a month or two in a year for the worship of their *Yidam*. This kind of retirement either for a short time or for a long period is called *chham* in Tibetan. I was in *chham* for a month in *Pushya* 1945, with the *tulku-lama* (*avatari* or incarnation-lama) Jayan Chhojur, popularly known as Nav-Kushok of the Simbiling Gompa, in a cave in Kailas-Manasa Region.

At the commencement of the *chham* the lama does *digbandhana* of the cave or the place where he intends staying for the purpose. *Digbandhana* (lit. restraining of the quarters) is a *tantrik* rite by which he restricts all evil spirits and evil influences coming from all quarters to throw obstacles in his *sadhana* (spiritual practices). During the period of *chham*, the lama would neither go out of the cave even for attending the calls of nature, nor would he speak with any outsider but for a servant or a monk-disciple, who would be putting up in a separate chamber of the same cave, for cooking his food and for rendering any other service. No outsider is allowed to enter the cave. Almost the whole of the day, from 4 a.m. to 9 p.m. is spent in repeating the *mantra* of the *Yidam* a number of times. During the period of *chham* the *mantra* of the *Yidam* is repeated 50,000 times, a lakh, a

million times, or any number that he has fixed to do. At the completion of the fixed number or fixed time, *purnakuti* (or final fire-oblations) are offered with elaborate rites which may take four to five hours. As in other rites, *sattu* and butter images (*धोपा*) of a particular type are made for the occasion. The *chhopas* made for each *Yidam* vary in shape, size, and number, though some are common. Splinters of wood of a particular length, clarified butter, *durva* (a kind of grass), barley, wheat, rice, peas, *til* seeds, mustard seeds, cooked rice, etc. are used for *ahutis*.

Tibetans believe that if *chham* is well observed for a sufficiently long period, the *Yidam* would manifest himself to the devotee and would lead him to the Highest Blissful State. It may be noted here that according to Tibetan Buddhists, *Nirvana* or the highest state of perfection is not extinction of the Self, but blowing out the flame of selfishness and longings and the attainment of the Highest Blissful State. *Chham* is also observed, oftentimes, for the fulfilment of some desire of the observer himself or of his devotee.

MANDALA

Every *Yidam* has got a separate *mandala* which is used only in the worship of that particular deity. A *mandala* or *yantra* is a mystic circle geometrically subdivided into circles, squares, or chords in which are painted some symbols, deities and *bijaksharas*. When the *Yidams* are worshipped in the *gompas*, their respective *mandalas* are elaborately prepared with finely powdered stone dyed in various colours. They are drawn in relief with minute details, wonderful precision, execution, and great skill. I witnessed four such *mandalas* or *yantras* in the Simbiling Monastery of Taklakot in Kailas-Manasarovar Region, where I stayed as an inmate for some time in 1936-37 and 1943-44. The diameter of the *yantras* was 4 to 5 feet. For the portable use of individuals during *chham*, the *mandalas* of different *Yidams* are painted on banners and planks of wood.

It is said that Tibetan lama-teachers took these *Yidams* from Bharatavarsha to Tibet; so the names of the lamas who

had actually invoked or took them to Tibet are given both in paintings and in books written about the *Yidam*. There are a number of *Yidams* in Tibetan Buddhism like Demchhog, Sangdul (presiding deity of Gurla Mandhata), Jigje, Kunrig, etc. I propose to give from time to time the description of a number of these tutelary and other deities of Tibetan pantheon which may throw some light on the undeciphered iconography of India.

DEMCHHOG OR DHARMAPALA¹

Demchhok or Demchhog is the presiding deity of the Holy Mount Kailas according to Tibetan mythology and scriptures. He is also the presiding deity of two more mounts, (1) Lapchi on Nepal borders and (2) Chari, 200 miles east of Lhasa. The iconographic form of Demchhog is highly interesting as understood in the light of the explanation which Tibetan mystics² offer for the many attributes associated with him. According to them, Demchhog represents Supreme Bliss, as he is of the rank of the Buddha.

Demchhog has four faces—the middle one is blue, the right one is white, the left green, and the back one is red. They represent the four-fold sets of ideas like four elements—earth, water, fire, and air; four virtues—compassion, affection, love, and impartiality; and so on. Each face has three eyes which symbolizes that he knows the time past, present, and future, that the three worlds are under his vision, and so on.

Each of his heads is adorned with a crown of five skulls representing the five-fold wisdom. The faces frown and the

1 "Shamvara was an *Asura* (demon) in Indian mythology, opposed to Indra, literally *sham* means bliss, and *cara* means screening. While translating the name in Tibetan, *shamvara* became 'Bliss Excellent' (Skt. *cara* also meaning excellent) and thus Shamvara in place of the demon that withholds bliss, became the deity of Supreme Bliss and was identified with Shiva, presiding deity of Kailas". Dr. Vasudeva Saran Agrawala.

2 This is the exposition given to me by the incarnation-Lama Nav-Kusbok of the Simbilang Gompa, taken from the book '*Yidam Demchhog*'.

teeth are set showing that all vices are overcome by him. On each head the hair is tied in a knot and each skull in the crown of head is adorned with a pearl or gem, showing that merit has been acquired to the fullest degree. The wheel of bone over the head is symbolic of meditation.

The ear-rings symbolizes fortitude; necklace charity; bracelets chastity; and girdle symbolizes energy. His blue body is the symbol of never changing form.

Demchhok has twelve hands which represent the knowledge of the twelve causes of the round of life (*avidya*, *samskara*, *vijnana*, *namarupa*, *shadayatana*, *sparsa*, *vedana*, *trishna*, *upadana*, *bhava*, *jati*, and *jaramarana*). The first pair of upper hands holds *dorje* (*vajra*), representing the knowledge and *tilbu* (bell), the method. To show that they are ever in union, the two hands clasp the *Shakti*. The second set of two hands holds a raw elephant-hide which they are tearing asunder. Elephant-hide is the symbol of nescience. The third right hand holds a *damaru* proclaiming joyous tidings; the fourth right hand brandishes a *tari* (battle axe) with which he cuts off the ties of births and deaths; the fifth right hand holds a *di* (dagger) to show that the six sins of pride etc. are cut off; and the sixth right hand grasps a *khatam* (*trishula*) showing that the root passions of *kama*, *krodha*, and *lobha* are controlled.

The third left hand holds a *khatvanga* (a staff surmounted by a *dorje* and *amrita-kalasha*), a sign of Supreme Bliss; the fourth left hand holds a blood-filled *kapala* (human skull) signifying that all ideas, material as well as non-material, are done away with; from the fifth left hand dangles a *thagpa* (noose) which denotes knowledge that grasps the nature of sentient beings; and in the sixth left hand is the head of four-faced *Chhangpa* (*Brahma*) showing that all delusions of the worldly cycle (*samsara*) have been shaken off.

He tramples an emaciated figure, symbolising time, under his right foot; and his left leg spurns the form of a black demon, symbolising space. Both these bodies are four-armed, the former a male figure and the latter a female one.¹

¹ In the clay model of Guru-gem there are four female figures under the right foot and four male figures under the left foot of Demchhok.

Round the waist, Demchhog is loosely draped in a tiger-skin as he is released from all distinction of matter and spirit. There is full symmetry and grace in his body, his countenance is heroic, stern, and severe. He is full of energy; he is awe-inspiring and yet he is compassionate, and his features are of a peaceful cast. This is the *ugra* (fierce) form of Demchhog. In the Tibetan mythology, most of the deities have three forms—the *ugra* or the fierce form, the *ranjaka* or the fascinating form, and the *saumya* or the peaceful form.

Dorje-Phangmo (lit. *Vajra-Varahi*) is the Yum or divine consort of Demchhog. The small snow-clad pyramidal peak called Tijung that is adjacent to the Mount Kailas on its western side, is the abode of Dorje-Phangmo. Dorje-Phangmo, Demchhog's Yum, Symbolic of Energy, clings to him in an inextricable embrace. She is red in colour which, in Tibetan art, is the symbol of affection for all beings. She has only one face since all things have one taste; she possesses two hands, for she comprehends both aspects of truth—the apparent and the real; her right hand holds a curved knife which is wisdom or consciousness that cuts away all qualifying thoughts and passions. She brandishes this weapon in all directions. With her left hand she clasps her partner. To signify that she has united the knot which holds all things to be what they appear, her hair is loose and flowing. She is naked for she is free from the obscuring veil of passion (*kama*). She, like her partner, is three-eyed and wears the crown of five skulls of five wisdoms.

He is *Purusha* and she is *Prakriti*. They are inseparable, so they are shown mutually interlocked and touching at all points of contact.¹ The marriage is consummated in the

¹ The ten-foot high clay model in Gura-gem and the bronze image in Simbiling Gompa are of this type. In some paintings, the right leg of the Yum is thrown hanging over the left thigh of the Yab and this is the type of the pose in the banner collected by August Gansser from the Deserted Cave-City of Pangtha. Still in some other paintings both the legs of the Yum intertwine the Yab; this is the type of representation which the author had seen in the banners of Simbiling Gompa. Those who are interested in the subject would do well to have a look into the bronze images of Yidams in Yab-Yum pose kept in the Museum and in the art gallery of R. B. Jalan at Patna.

midst of a halo of flames, the fire of Supreme Wisdom which burns up all obstacles and nescience.

In Tibetan paintings of gods and goddesses, bliss is represented by blue colour, and devotion to the service of beings by red colour. So most of the *Yidams* are painted in blue colour.

APPENDIX VIII

REV. SWAMI PRANAVĀNANDA, F.R.G.S.

(Of the Holy Kailas and Manasarovar).

A SKETCH OF HIS LIFE AND WORK¹

Rev. Swami Pranavānanda hails from East Godavari District in Andhra Desa and was born in 1896. His household name was Kanakadandi Venkata Somayajulu. He graduated from the D. A. V. College, Lahore, in the year 1919. For a short period he served in the Railway Accounts Office, Lahore, but resigned the post and joined the Non-co-operation movement. The spirit of love and service has been the heritage from his parents. From 1920-26, he was an active Congress worker in West Godavari District. Then he had a call from the heights of the Himalayas in consequence of an internal urge for search after Truth. Accordingly, he was initiated into the Holy Order by the great Acharya Shree 108 Swami Jnananandaji Maharaj.

Dr. Jnanananda, after attaining Realization, took to Scientific Research with the aid of his intuitional knowledge. He had conducted experimental research for well-nigh 15 years on the Continent in different Physical Laboratories at Dresden, Berlin, Prague, Liverpool, Ann Arbor (Michigan) and other places, in Spectroscopy of X-Radiations, Beta-rays, Magnetic Electron Lenses, Isotopes, Nuclear Physics, High Vacua, and allied subjects; and he is at present taking part in the National Physical Laboratory, Delhi, as the Senior Scientific Officer. It is from this great Swami-Scientist that our Reverend Swami Pranavānanda derived his inspiration for search after Truth and for things Scientific.

¹ Taken from the 'Indian Geographical Journal', but the information has been brought up-to-date by the Publishers.

Shree Swamiji has extensively travelled in the Himalayas for well-nigh 23 years in connection with his Spiritual *Sadhana*. During this period he has had occasion to study the Geography and Topography of several regions therein. He lived in Gangotri for full one year (1934-35), even after the temple-gates were closed for winter and visited Gaumukh, the glacial source of the Ganges, several times.

The Swami visited Kailas and Manasarovar for the first time in the year 1928 via Kashmir-Srinagar, Ladakh, and Gartok. Since then he has been visiting Kailas-Manasarovar Region every year mainly for his Spiritual practices ; and he usually lives there for about six months in the year, but carries on research work also in different branches of science, such as Geography, Geology, Botany, Zoology, Archaeology, etc., as a hobby during his leisure hours. He visited this Region by various routes in different seasons of the year.

The Swami spent a whole year in 1936-37 and a full sixteen-month in 1943-44 as an inmate of the Thugolho Monastery, on the southern shores of the Holy Lake Manasarovar, a rare privilege, never before accorded to a non-Buddhist monk, as we learn from Mr. Paul Brunton's book 'A Hermit in the Himalayas'. The minimum temperature during his stay in winter was 50.5°F. below freezing-point. During his stay at Manasarovar the Swami recorded how the Manas and Rakshas lakes froze in the beginning of winter, what changes ensued after freezing, and how the lakes thawed in spring. Thus he made a comparative study of the characteristic features of the sister-lakes, which no European could so far do, since none lived on the shores of the Lake continuously all the year round. When the Ravan Hrad was frozen in winter, he went over the lake on ice and made a rough survey of the two islands in it. He is the first non-Tibetan to land on these two islands. Rev. Swami Pranavananda's competency for the task is unique. He has the simplicity and bravery, the fortitude and endurance of the best of the *sanyasis* ; he has the inquisitiveness and fidelity to truth of the scientist ; he is not dogmatic ; he is keenly observant ; records his observations carefully ; and gathers them up with a view to making them available to people at large ; above all he has the

tenacity of the bulldog to do the work he takes up in hand. Up till now the Swami has completed 23 circumambulations of the Mount Kailas and 25 of the pre-historic Lake Manas.

Our Swami is very well-known in the Kailas-Manasarovar Region and other parts of Western Tibet and is loved deeply by officials, monks, and people in general, since he carries a 'Free Travelling Dispensary' and renders medical aid to the rich and the poor alike. He is known there as '*Gyagar Lama Guru*' (Indian Lama Guru), '*Thugu Rinpoche*' (His Holiness of Thugolho Monastery), and '*Gyagar Amji*' (Indian Doctor). With the aid of the Governor of Purang-Taklakot and the Viceroys of Gartok (Western Tibet), he visited the Real Sources of the Four Great Rivers of the Holy Kailas and Manasarovar, namely the Brahmaputra, the Indus, the Sutlej, and the Karnali. As a result of his several explorations and Geographical researches, the Swami has exploded the findings of Dr. Sven Hedin, the Swedish explorer, regarding the sources of the four rivers of the Holy Kailas and Manasarovar and has fixed the sources of these rivers from different criteria, namely tradition, length, quantity of water, and glaciers, after actually visiting these places. This has evoked great sensation among the Himalayan Geographers all the world over, since this very valuable contribution of the Swami has reopened a question supposed to have been settled by Dr. Sven Hedin as far back as 1908. It will not be out of place here to make a mention that "the very valuable contribution which the Swami has made to the Geographical knowledge of the Kailas Region", has been very much appreciated by the Surveyor-General of India. The Swami's findings have been accepted by the Royal Geographical Society, London and the Survey of India Office which have incorporated them in their maps of 1941 and 1945—Hind 5000 Sheet N.H—44 and 62 F.

Though he does not profess to have the technical knowledge of a trained Geographer, the results he has achieved and the spirit of minute observation and searching enquiry displayed in his work are really commendable. One cannot but be convinced by the remarkably logical and lucid arguments with which the findings of Dr. Sven Hedin are challenged and disproved. He has exhibited to the world how Indians

do not lag behind others in the spirit of adventure and exploration. The Swami is the first of the living Indian explorers, and has vindicated by his researches Indian's claim to original work of the kind. We trust that his work would inspire many an Indian youth to undertake travels of adventure and exploration. 'The Daily Telegraph' of London writes of him as "the distinguished Indian Sanyasi-Explorer and Scientist".

Some of the papers of the Swami have been published in the Journal of the Royal Geographical Society, London, Calcutta Geographical Review, the Indian Geographical Journal, and several leading Newspapers of India. He contributes papers to the Indian Science Congress as well. Two of his lectures delivered at the University of Calcutta have been published by the University in a book-form entitled 'Exploration in Tibet', which elicited the appreciation of several eminent Geographers like Dr. Longstaff, Dr. Somerwell of the Everest Expedition, Mr. Wadia and others. A thoroughly revised and enlarged second edition of this book is being brought out now. This book has been prescribed as one of the text-books for the M.A. and M.Sc Examinations in Geography, since the year 1942. He also wrote the book 'Pilgrim's Companion to the Holy Kailas and Manasarovar', and this has now been developed into the Volume 'Kailas-Manasarovar', royal octavo 250 pages, with 150-illustrations and 17 maps, published by the S. P. League, Calcutta. Besides these two books, the Swami has written an exhaustive work in Hindi in four parts. *Kailas-Manasarovar*, covering about 450 pages, the counterpart of which is awaiting publication in Gujrati, Bengali, Marathi, Telugu, Tamil, and Kanarese. The Swami has written an elaborate commentary of over 1000 pages on *Srlmad Bhagavad Gita* in Telugu, which is awaiting publication. He has also written a few pamphlets on spiritual subjects.

In 1946, the Swami took a three-seater light rubber boat 'JANMA-BHOOMI' and sounded the Gouri-kund, the highest lake (18,400 feet above the sea-level) ever sounded so far. This is a unique feature in the annals of the Gouri-kund, for it was completely cleared of ice for the first time in its

history. Before concluding his trips to Kailas Region the Swami wants to sink his lead in the Manas lakes and definitely locate the thermal springs situated in their bed and to reach the centre of the Lake which is considered inaccessible by Tibetans and which has not been reached by any one hitherto. To achieve this end he had bought, in 1942, an up-to-date four-seater full length 18-gauge galvanized-steel sailing-dinghy 'JNAN NAUKA', weighing 440 lbs., with sailing equipment and airtight chambers fore and aft, to make it unsinkable. He had taken this 'JNAN NAUKA' to Manasarovar in August last and launched it in the Lake and took a few tentative soundings. He has taken an outboard motor during the summer of 1948 to complete his work. This will indeed be a unique incident in the history of the Sacred Lake. After the exploration work is completed the Swami has no intention of bringing the boat back to India, but wants to hand it over to the Darma Seva Sangha for the benefit of future pilgrims and tourists.

In October 1942, the Swami did a close and complete circumambulation of the Ravan Hrad (Rakshas Tal) for which he had been planning for a decade. He ascertained the actual circumference of the lake and the number of islands in it; traced the source of the Sutlej by examining the so-called 'Old Bed of the Sutlej'; noted the flow of the water in the Ganga Chhu from July to October; and collected a few geographical specimens. He also reached the perpendicular walls of the northern and southern bases of the Kailas Peak for the third time and crossed all alone, for the second time the Khando-sanglam la, a pass with deceptive crevasses, on the eastern side of the mount, which was neither known to nor crossed by any non-Tibetan up till now. He crossed the pass for the first time in July 1941. Besides the Khando-sanglam la, he had negotiated three more new passes, namely Charok-phurdod la (in 1937, '42, and '46), Topchhen la, and Lhe la, all above 18,000 feet high (in 1937).

In 1942, the Swami collected a fourteen-pound marine fossil-bed from the Tso Kapala, which is the first find of fossils from Kailas Range. It has been examined by the Geological Survey of India Office and was found to belong to

the Mesozoic age (19 crore-year old). In 1945, the Swami reached the northern and southern perpendicular walls of the Kailas Peak and brought some specimens of the rock. He also brought some marine fossils from the Ganga Chhu and specimens of serpentine (*Zaharmora*) from the south-eastern side of Kailas. In 1946, he visited the deserted Cave-Colony of Pangtha and he now proposes to lead a small Archaeological Expedition to this Colony once again, to take some photos of the fresco paintings and collect from the caves all materials that may be of interest. In 1947, he collected 99 fossils from Bongza Range in Central Tibet, and some more marine fossils and bone fossils from different parts of the Manas Region. He also collected from this Region a few implements of the stone-age. He brought to the notice of the Geographers several hot springs which might, with great advantage, be tested for Radio-activity and radon content. He did a full round of the Mandhata Range in October 1948 and found that the boundary of Nepal adjoining the Manasa Khanda, as given in Survey Maps, is erroneous.

It may be mentioned that there is no lotus or lily in Manasarovar. So, for the last few years, the Swami has been making experiments to culture lotus, lily, *singhada* (water-chest nut), and *makhana*, in the Manas Lakes. It is yet to be seen how far he would be successful in his experiments, but all the same it is a novel idea worthy of praise and worth the trouble. The Swami, being an Ayurvedic Physician himself, has discovered a wonderful aphrodisiac drug in the Manas Region which, it is said, is not to be found in other parts of the Himalayas. We understand that the drug is being sent for analysis and confirmation of the properties attributed to it. A description of the drug is given in page 65 of this book.

The Swami has been carrying on research on 'Musk and Musk-deer' for over twelve years which he hopes to complete in a year after a systematic Histological and Cytological study of the animal by bringing a live animal to a laboratory in the plains. It may be remembered that the Swami has read a paper on 'Musk and Musk-deer' (though not concluded) in the Medical and Veterinary Section of the Science Congress

held in Baroda, and in the Universities of Benares, Lucknow, Patna, and Calcutta and Lahore Ayurvedic Conference. Every year he does some exploration or research work in some branch of Science or other in his own humble way. It is really a matter of pity that none of our Universities utilize the experience and services of such a brilliant explorer and scientist like our Swami. Yet the Swami, unmindful of any help does his work for work's sake, in the spirit of a true *Karma Yogi*.

Our Swami is not only a full-fledged Spiritual *Sadhaka*, Explorer, and a Scientist but also a bit of a Historian. He has collected a good deal of material regarding the Kashmiri General Zoravar Singh, who was killed in an engagement with the Tibetans in Manasarovar Region in 1841 and whose death centenary was celebrated at Taklakot by the Darma Seva Sangha, in which the Swami gave a learned talk. We learn from one of his friends, Mr. Paul Brunton, that he is well up both in Hatha and Raja Yoga and that he carried on a systematic research in the famous *Khechari Mudra*.

The Swami has made a good collection of Tibetan curios for his 'Kailas-Manasarovar Museum', which we understand, the Provincial Museum, Lucknow, has acquired. The Swami has done a great service to the cause of Archaeology by surveying and getting a full and first-hand detailed account and a plan of the 'Barari Caves' near Bhagalpur (Bihar) published in the 'Journal of the Bihar Research Society', Vol. XXXIV, Parts I and II, 1948. The Caves are considered to be of pre-Buddhistic period though they were later used by Buddhist monks. A mention of these caves was made by the Chinese pilgrim Huen Tsang (A.D. 635). He had also thrown some new light regarding the real site of the famous Buddhist Royal University of Vikramashila. It may be remembered in this connection that the site of Vikramashila has not been identified so far. We are glad to hear that the Archaeological Survey of India has immediately declared it a protected area and that the Central Government have given it priority for excavation work. 'Journal B. R. S.', Vol. XXXIV, Parts III and IV.

The Swami has got constructed a YAJNA VEDI on the shore of the Manas at Thugolho, where the Birthday of Lord Shree Krishna is celebrated every year. Besides, he has been trying for the last several years to construct Rest Houses on the shores of the Holy Lake and at Kailas.

It is no small surprise that a Swami who repaired to the Himalayas chiefly for spiritual practices, besides being inspired by the mystic grandeur of the holy places, could still find leisure and inclination to study the Aesthetics, Geography, etc., of the same and also render a faithful and minute account of the whole, for the benefit of Humanity. We fully wish and hope that Shree Swamiji will continue to enlighten the outside world on the many other Himalayan Problems awaiting solution and combine scientific pursuit with Spiritual *Sadhana*, as in fact like our ancient *Rishis*, he has striven to do so far with such wonderful results. Mr. D. N. Wadia, formerly of the Geological Survey of India and President of the Indian Science Congress of Baroda, writes in 'Current Science' thus, "Sincere thanks and congratulations of all Geographers and of Indian Naturalists in particular are due to the Revered Swami Pranavananda for publishing results of valuable explorations conducted by him during his pilgrimages in the Region of Mount Kailas and Manasarovar in Western Tibet".

"As a mark of appreciation and recognition of his excellent achievements, explorations, and other scientific researches," the Indian Geographical Society has elected the Revered Swami Pranavananda as an Honorary Life Member.

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